No More Elsewhere:

Antarctica through the Archive of the Edward Wilson (1872–1912) Watercolours

A dissertation presented
by Polly Emma Gould
to UCL
in partial fulfilment
of the requirements for the degree
of Doctor of Philosophy,
London, September 2015

I, Polly Emma Gould, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

ABSTRACT

Thesis Supervisors:
Professor Jane Rendell
Professor Victor Buchli

No More Elsewhere:
Antarctica through the Archive of the Edward Wilson (1872–1912) Watercolours

In the light of recent centenaries commemorating the heroic era of Antarctic exploration and the current focus on climate research in Antarctica, this thesis asks how art and writing, made out of observations of Antarctica through the archive, can inform contemporary questions regarding climate change. It pays specific attention to Edward Wilson (1872–1912) and the impossible practice of 'en plein air' watercolour painting in the extreme sub-zero conditions of the polar environment, and considers Wilson's biography and watercolours through the early work of anthropologist Franz Boas (1858–1942) on the colour of water, and his later anthropological writing. Crossing over between art, anthropology, material culture and architecture, and engaging with feminist new materialism or, 'how matter comes to matter',[1] and in the light of thinking on ecological and post-human subjectivity, this thesis takes up a critical position concerning the role of observation in the history of anthropology, science, and art. I employ a refractive methodology, informed by Rosi Braidotti's 'transposition',[2] and Sigmund Freud's 'Entstellung'.[3] The refractive method gives the accent to the distorting and displacing effects of medium by practising and thinking through 'elsewhere'.

The artworks are initiated by copying from archival sources and result

1 Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, London: Duke University Press, 2007).

2 Rosi Braidotti, *Transpositions* (Cambridge: Polity Press, 2006).

3 Sigmund Freud, *Interpreting Dreams*, trans. by J.A. Underwood (London: Penguin Books, 2006).

in drawings, watercolours, pin-board assemblages, blown-glass globes, moulded glass, wax maquettes, and re-enacted magic-lantern shows. Informed by Jane Rendell's 'Site-writing',[4] the writing is an ekphrasis, structured as a literary chiasmus, in which readings crossover, and refract through, each other. This chiastic ekphrasis is a material-discursive method, which combines art making and writing. It brings a feminist new materialist critical engagement with the race and gender normativity of Antarctic heroism, to argue that the archive of Antarctic watercolours can be interpreted to produce an ecological post-human ethics and optics founded on ice rather than glass.

4 Jane Rendell, *Site-Writing: The Architecture of Art Criticism* (London, New-York: I.B.Taurus, 2010).

POLLY GOULD

No More Elsewhere: Antarctica through the Archive of the Edward Wilson (1872-1912) Watercolours

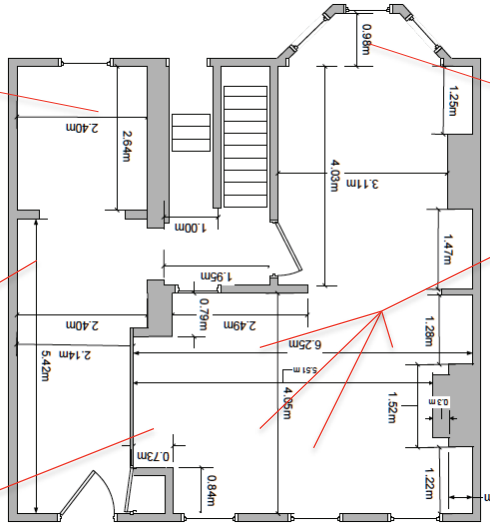
24th February 2016
Danielle Arnaud
London

ground floor

Penguin Pool, 2015
magic lantern performative lecture with audience participation documented with magic lantern slides on light box and printed cards as displayed in the performance

Horizon (false horizon),2013
pencil on paper, watercolour on paper

Antarctic Archive, 2013
found material, printed matter, pencil on paper, watercolour, photographs, inkjet prints, pins, paper clips



Suiseki Bergs, 2013
three Edwardian mahogany nesting tables with hand-blown glass

Observation Hill, 2014
62 x 75cm

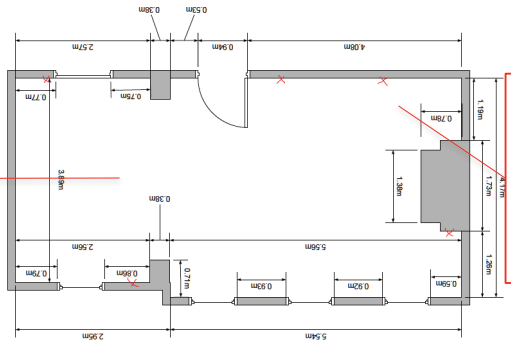
Mount Erebus and Northern Islets, 2012,
45 x 45cm

Hut Point from the Gap, 2012, 30 x 30cm

Hut Point, 2012
90 x 90cm

hand-blown glass spheres, watercolour on sand-blasted glass

Lantern Landscape, 2013
installation with tulip wood, wax, paint, moulded glass, magic lantern projector



Lantern Lecture, 2013
magic lantern lecture with data projection and Lantern Landscape 2013 installation and a musical performance by Hibiki Ichikawa on the shamisen amongst globe works downstairs – documented with an A4 paper script

first floor

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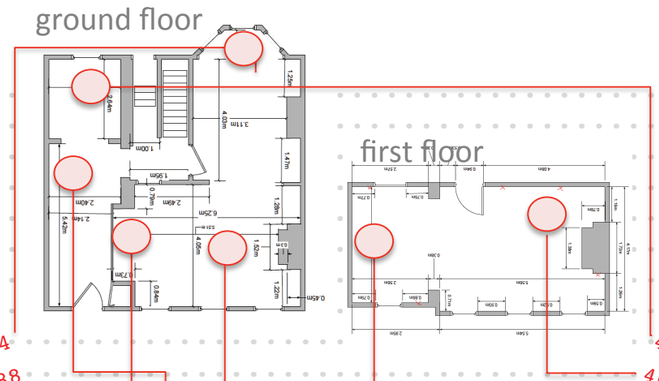

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ACKNOWLEDGMENTS

I would like to acknowledge the considerable and varied sources of support that I have enjoyed in the last few years while researching, writing and making my PhD project. The full-time attention that I have been able to give to my research was made a practical possibility thanks to the Arts and Humanities Research Council, AHRC, and my award for Doctoral Studentship funding. I have felt proud to be associated with my fellow AHRC studentship recipients. In addition to this source of funding a UCL Global Excellence Scholarship Award in 2010 made me feel very welcome at UCL.

My foremost thanks go to my primary supervisor, Professor Jane Rendell, to whom, as my closest reader, I feel immense gratitude. Jane is one who knows, certainly as much and probably more than anyone, of the intricacies, affects and spaces of reading and writing. I would like to thank her for her intellectual brilliance and her remarkable generosity. Jane, it has been an absolute pleasure – thank you. I thank Professor Rendell also in suggesting Professor Victor Buchli as my second supervisor in Material Culture at the Department of Anthropology, UCL. Thank you Professor Buchli for all those wonderful conversations – many shared with Professor Rendell – that were so interesting, offering innumerable insights, always immensely productive. It has been a delight to have the benefit of your attention focused on my concerns and efforts.

As for the wider academic environment, I wish to acknowledge the architectural historians, theoreticians and designers of the PhD Programme at The Bartlett School of Architecture. The standard of critical rigour and inventiveness to be found there has made it a wonderful home for the last years. Amongst those academics and participants, I want to give an especial thanks to Dr Peg Rawes, who has introduced me to so many aspects of new materialism and invited me to participate in her Material Architectural Ecologies Seminar from autumn 2014 to spring 2015. It was Dr Rawes who also provided me with opportunities to present to visiting academics such

as Professor Claire Colebrook and Professor Rosi Braidotti.

I'd like to thank Bartlett Research for giving me PhD conference funding to attend the Professor Braidotti Summer School 'Critical Theory Beyond Negativity: the Ethics, Politics and Aesthetics of Affirmation' in Utrecht in August 2014. I'd like to thank Professor Braidotti for her inspirational, whirlwind-style seminars and lectures, and the opportunity during that week to present a small aspect of my research to her and the assembled participants. I'd also like to thank PhD candidates Emily Hayes and Liz Haines for their invitation to present a version of Chapter Two at the International Conference of Historical Geographers, July 2015, Royal Geographical Society.

The archives that house the Edward Wilson material to which I have referred are the other very significant institutions that have aided my research. I'd like to acknowledge the support of those archives: Scott Polar Research Institute, Cambridge; Royal Geographical Society, London; The Wilson: Cheltenham Art Gallery and Museum, Cheltenham; Dundee Heritage Trust, Dundee; Wellcome Trust Archive, London; and the British Library, London.

This PhD has been a practical one in that it has been developed through and in relation to my art practice. I'd like to give a big thanks to my gallery, Danielle Arnaud. Danielle Arnaud made it possible for me to present the artwork represented in this thesis for my solo show No More Elsewhere 2013, and she also hosted two further performative lectures in 2013 and 2015. I'd like to thank the participants in the discussion that followed the second performative lecture Penguin Pool 2015: Emily Hayes, Dr Peg Rawes and my friend and founder of the Google Cultural Institute, Steve Crossan. In addition to the support of my gallery, I want to mention the contribution that Stewart Hearn at London Glass Works has made in collaborating with me in the production of the works in glass. Mr Hearn and his assistant Alex Pearce have been wonderful to work with. Mr Hearn has engaged thoroughly with the specific challenges that I brought to his studio and with his incredible faculty for working with glass has realised my designs. I also want to express my thanks for the design of this thesis. I have imagined the final form of the printed thesis as a material artefact, and to that end this thesis has been

realised with the graphic design talent of Ken Kirton and Mélanie Dautreppe-Liermann of Studio Hato, London. And finally, I'd like to thank Dr Frances Follin for undertaking the task of proof reading: a skill for which I have great respect. Any remaining errors are my responsibility alone.

To begin and end, I wish to say a huge 'thank you' to my closest people who, like the ever-present weather, have provided the breathable atmosphere of my everyday: to Clem Crosby, who left me alone and didn't leave me alone in just the right ways – thank you, my darling: and to my children Indira, Lillan and Stanley who have all promised to read my PhD – I promise to be your attentive reader in return, for whatever form your writing takes: and to my mother, Jen Gould for her example and continuing support. And remembering my father Donald Gould, to whom, in so many ways, this writing is addressed.

NOTES ON ACRONYMS

BL – British Library

CAGM – Cheltenham Art Gallery and Museum, Cheltenham

DHT – Dundee Heritage Trust, Dundee

RGS – Royal Geographical Society (with IBG), London

SPRI – Scott Polar Research Institute, University of Cambridge

WF – Wellcome Foundation, London

Notes: Access dates are indicated in square brackets i.e.,[19 September 2014]

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3.10 Robert Falcon Scott, 'The Southern Journey, 1911–1912' in *South Polar Times*, Vol. 3, part I (London: Smith, Elder & Co., 1914), pp. 24–32, p. 27 © The Royal Geographical Society (with IBG), with permission.

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4.2 Franz Boas, *Boas Glacier, Neeta Incognita, Watts Bay, Frobisher Bay*, 1883 (albumen print) Franz Boas Papers, American Philosophical Society, Philadelphia. Mss.B.B61, F11-1-7, graphics 5322 © American Philosophical Society, with permission.

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4.6 'Tabloid' Brand Medical Equipment in Arctic and Antarctic Exploration' advertisement in *Wellcome's Medical Diary and Visiting List*, 1910, WF/M/PB/003/23, Collection: Marketing, Wellcome Foundation Publications © The Wellcome Foundation Ltd Archive, Wellcome Library, London, with permission.

4.7 Wilson's medicine case in glass display case, c. 1910, WF/M/I/PR/E43, Collection: Marketing, Images c. 1890-1990, Explorer: Scott, c. 1910 © The Wellcome Foundation Ltd Archive, Wellcome Library, London, with permission.

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4.13 'Colour-Types of M. Broca. Hair & Skin' in *Notes and Queries on Anthropology for the Traveller and Resident in Uncivilized Lands*, First Edition, 1874 © The British Library Board, 10007.b.8, pages between p. 8 and p. 9.

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4.18 First Floor Plan, in Pier Luigi Nervi and Pitt Rivers Museum, *The New Pitt Rivers Museum and Proposed Centre for the Study of Anthropology and Human Environment* (Oxford: University of Oxford, c. 1969) © Pitt Rivers Museum, University of Oxford, with permission.

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4.20 Polly Gould, *Penguin Pool*, 2015 (lantern slide of igloo building, 8 x 8 cm) © Polly Gould.

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5.3 Scott's Hut, Cape Evans on Ross Island. Google Street View © Google 2015 <http://www.google.co.uk/maps/@77.6360378,166.4178409,3a ,75y,326.11h,64.66t/data=!3m7!1e1!3m5!1si4VJv12nVmED8qhDn-KQnA!2e0!3e2!8i6656!6m1!1e1> [24 August 2015]

5.4 'This Book Belongs to …' *Wellcome's Medical Diary and Visiting List*, 1910, WF/M/PB/003/23, Collection: Marketing, Wellcome Foundation Publications © The Wellcome Foundation Ltd archive, Wellcome Library, London, with permission.

5.5 Polly Gould, *Penguin Pool*, 2015 (lantern slide showing 'The history of two pairing chromosomes in meiosis', 8 x 8 cm) © Polly Gould.

5.6 Mawson's Huts Replica Museum, exterior view. Mawson's Huts Replica Museum, Hobart, Australia.<http://www.mawson's-huts-replica.org.au> [24 August 2015] © Mawson's Huts Foundation, with permission.

5.7 Mawson's Huts Replica Museum, interior view. Mawson's Huts Replica

Museum, Hobart, Australia.<http://www.mawson's-huts-replica.org.au> [24 August 2015] © Mawson's Huts Foundation, with permission.

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5.12 Herbert Ponting, *Ponting lecturing on Japan. October 16th 1911*, 1911 (glass plate negative, 12.7 x 17.7 cm), SPRI P2005/5/543 © Scott Polar Research Institute, University of Cambridge, with permission.

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5.16 Polly Gould, *Penguin Pool*, 2015 (performance still with lantern slides on light box) © Polly Gould.

5.17 Polly Gould, *Penguin Pool*, 2015 (the cards of lantern slides for audience to select) © Polly Gould.

5.18 Polly Gould, *Penguin Pool*, 2015 (performance still with magic-lantern projector showing lantern slide of Edwardian gentlemen in the sea) © Polly Gould.

5.19 Polly Gould, *Penguin Pool*, 2015 (lantern slide of 'Another series of embryos (After Håckel).] [sic]') © Polly Gould.

5.20 Edward Wilson, text and illustrations of 'Some Notes on Penguins', pp. 3–8 in Scott, Shackleton, Bernacchi (eds.) *South Polar Times*, Vol. 1, part IV, July 1902 (London: Smith, Elder and Co., 1907), p. 3 © the Royal Geographical Society (with IBG) with permission.

5.21 Emperor penguin egg collected in 1911, on Scott's last expedition to Antarctica. Image ID: 100200, Collection: Museum, Category: Treasures © The Natural History Museum/ The Trustees of the Natural History Museum, London, with permission.

5.22 D'Arcy Wentworth Thompson, 'let us now inscribe in our Cartesian coordinates the outline of a human skull', in *On Growth and Form*, 2nd edn. (Cambridge: Cambridge University Press, 1942), pp. 1082–1083.

5.23 Polly Gould, *Penguin Pool*, 2015 (performance still, lantern slide of genetic chiasm) © Polly Gould

5.24 Edward Wilson, penguin crest illustration in *South Polar Times*, ed. by Apsley Cherry-Garrard, (London: Smith Elder, & Co., 1914), Vol. 3, part II (crest illustration), p. 51 © The Royal Geographical Society (with IBG), with permission.

5.25 George Clark Simpson, 'Fragments of a Manuscript found by the people of Sirius when they visited the earth during the exploration of the solar system'. *The South Polar Times*, ed. by Apsley Cherry-Garrard, Vol. 3, part II, September 1911 (London: Smith, Elder, & Co, 1914.), p. 75 © The Royal Geographical Society (with IBG), with permission.

5.26 Polly Gould, *Penguin Pool*, 2015 (lantern slide of penguins in zoo) © Polly Gould

Epilogue

6.1 Herbert Ponting, D. Lilley [sic] *with a Glass Sponge*, 1911 (glass plate negative, 20 x 17.5cm), SPRI P2005/5/874 © Scott Polar Research Institute, University of Cambridge, with permission.

6.2 *Eucecryphalus schultzei radiolarian*, a glass model of a radiolarian, created by Leopold and Rudolf Blaschka in the late nineteenth century and held at the Natural History Museum, London. Image ID: 054686, Collection: Animals, Category: Miscellany © The Natural History Museum/ The Trustees of the Natural History Museum, London, with permission.

6.3 Polly Gould, *Penguin Pool*, 2015 (lantern slide of radiolaria, 8 cm x 8 cm) © Polly Gould.

6.4 Polly Gould, *Penguin Pool*, 2015 (lantern slide of snowflake with stain, 8 cm x 8 cm) © Polly Gould.

Prologue *Epilogue*
Glass *Ice*

Fig 0.1

Notes from the Field *Field Notes*

5.30: 27 March 2013. I can see my breath in the freezing air. I have to leave early to fit in with the timetable of the glass studio. The sun rising is as bright and red as the open hole of the glory hole. The news this week is that industry came close to having the gas turned off owing to low supply levels and cold weather. The glass furnaces are powered by gas. I take gas supply for granted.

Stewart begins by melting Kügler sticks, a highly concentrated colour mixed with clear glass. The glass-stick pigment is so dense that it seems to appear black. The different colours are only really visible when they are blown into thin translucent forms. Glass is coloured with metallic oxides and metals: cobalt carbonate for cobalt blue; other blues from copper; poisonous arsenic and chromium for emerald green; tin oxide for light green; metallic gold chloride for gorgeous ruby-red; copper for dark red; cadmium for red; titanium for brightening; uranium green for a radioactive glow popular for use in early twentieth-century ornaments and interior decoration; the fugitive manganese gives amethyst, violet and purple blue; iron provides earthy greens and browns.

Stewart estimates how much glass will be needed for the volume of the mould - approximately double or more than the end piece. Blown glass, Stewart explains, tends towards the spherical. He forms the ball of molten glass in carved bowl-like wooden shapers. It has to be kept constantly turning and workable by heating it in the glory hole (Fig 0.1). The cooperation between the two glassmakers as they move in concert is remarkable (Figs 0.2 & 0.3). At times one must blow air into the vessel while the other keeps it turning.

Once formed, with one continuous movement, Stewart goes up the steps, puts the shape into the mould, and blows to expand it to the full extent. At the same time, Alex has to pat the glass down into the mould. As the hot glass is blown into the void of the mould, a popping and cracking sound is made as pieces of the mould break away. It means that the next imprint will be without this detail or without that missing facet. Stewart says that the mould should supply three or four copies, each subsequent version becoming less distinct.

Stewart pulls the rod up to release the glass from the mould (Fig 0.4), and takes it over to the bench. Here, he taps the neck of the blown form to break it

away from the blowing rod. At this stage the shape formed by my mould is attached to a bulbous excess of glass that will later be cut off and discarded. With speed Alex must take this piece in his heat proof gloves and place it gently into the kiln where, to avoid shattering, it will be allowed to cool gradually over the next day or so. Only when it is cooled enough to remove from the kiln will we be able to judge whether the results are a success. The goal is to see if the plaster moulds I have made can function as the forms in which to press blown 'glass bergs' to produce my versions of miniature icebergs. These two materials are separated by extremes of temperature: a formidable heat is required to make ice from glass.

Fig 0.2

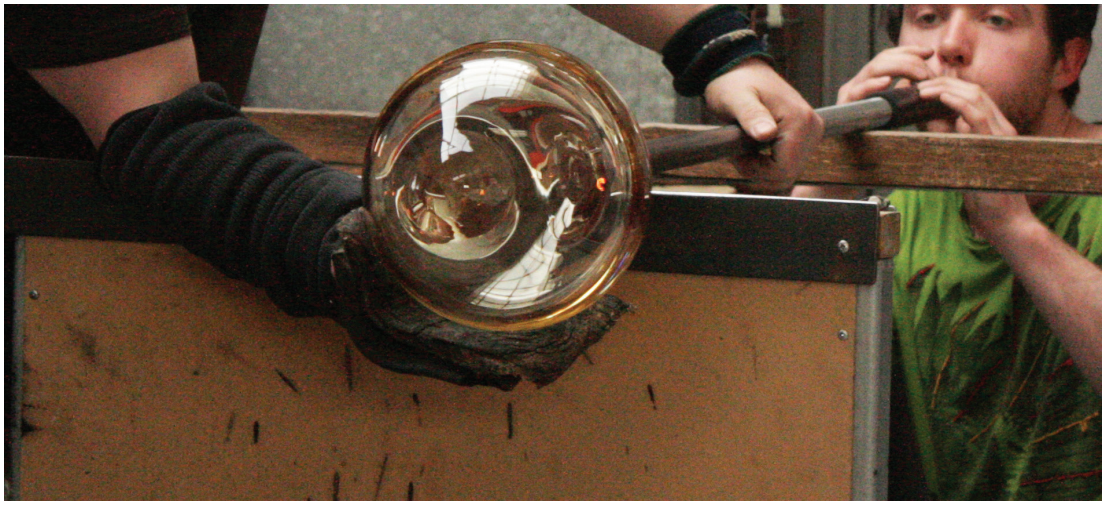

Fig 0.3

Fig 0.4

Glass *Ice*

'No More Elsewhere' looks to the past of heroic Antarctic exploration, paying attention to Antarctica through the archive of the Edward Wilson (1872–1912) watercolours. I argue in this thesis that Antarctica is an elsewhere that is intimately implicated in our climate and the future human habitation of the planet. By this I mean that although Antarctica is a remote and largely inaccessible territory to most people, the changes that occur there, such as ice loss, have consequences for climate elsewhere, and intimately so, in terms of the very atmospheres that we breathe. My thesis makes a contribution to the growing area of new materialism's engagement with the field of art practice, drawing upon art, art history, anthropology, architecture, material culture and geography. New materialism is a category of theories that include innovative materialist critiques in which the human is decentred. It is new in the sense of a re-orientation towards a post-anthropocentric materialism that involves a post-human critique of subjectivity by thinking about matter and processes of materialisation.[5] My practical encounter with the Edward Wilson archive began with copying what I found there. The resulting works are pencil drawings, watercolours, pin-board assemblages, blown glass globes on painted glass, moulded glass on mahogany, wax models with a magic lantern projector, and performance lectures.

Edward Wilson was a well-known Antarctic explorer of whom numerous biographies have been written, the earliest being by George Seaver in the 1930s[6] and the most recent by Isobel Williams[7] and Wilson's great-nephew, David Wilson, a Polar scholar, who has also published books on Wilson's painting.[8] They follow his biography as an Antarctic explorer, as a naturalist

5 See Rick Dolphijn and Iris van der Tuin, *New Materialism: Interviews & Cartographies* (Open Humanities Press, 2012), Dolphijn and van der Tuin identify Rosi Braidotti, Manuel De Landa, Karen Barad and Quentin Meillassoux as four key theorists in new materialism.

6 George Seaver, *Edward Wilson of the Antarctic: Naturalist and Friend* (London: John Murray, 1933); George Seaver, *Edward Wilson Nature-Lover* (London: John Murray, 1937); George Seaver, *The Faith of Edward Wilson* (London: John Murray, 1948).

7 Isobel Williams, *With Scott in the Antarctic: Edward Wilson, Explorer, Naturalist, Artist*. (Stroud: The History Press, 2008).

8 David M. Wilson and C.J Wilson, *Edward Wilson's Antarctic Notebooks* (Cheltenham: Reardon, 2011).

or an artist, or any combination of these, but they have not treated Wilson and his watercolours in the manner in which I have addressed them here. These treatments of Wilson and his archive, though having merit, have been conventional, in the sense that they map a trajectory of events, often with a sense of the linear time of the subject's life story, often with a discussion of his character and his motivation, which may include some psychological interpretation.

In common with conventional biography, I do aspire to accuracy regarding the facts, so what I have not done is transpose what might be taken as the facts of Wilson's life into fiction, rather I have shifted the orientation and, therefore, taken a different route through what may be considered a kind of topography of Wilson's life and work. In my version of the biographical work of writing I have taken Wilson's life as a source for what Louis van den Hengel calls, 'zoegraphy […] a radically post-anthropocentric approach to life narrative'.[9] Van den Hengel, drawing upon the work of Rosi Braidotti, moves away from the identity of 'bio' in biography, as a self-contained entity, towards a description of 'zoe', as life traversed by forces.

In Braidotti's writing the shift from bio to zoe decentres the rational subject of humanism in the post-human turn towards a project for an affirmative ethics of life. Braidotti writes:

> Zoe refers to the endless vitality of life as continuous becoming. […] This mode of diffuse yet grounded subject-position achieves a double aim: firstly it critiques individualism and secondly it supports a notion of subjectivity in the sense of qualitative, transversal and group-orientated agency.[10]

Braidotti terms this kind of subjectivity an 'ecological entity' with an associated ethics, which she describes like this:

> An affirmative ethics for a non-unitary subject proposes an enlarged sense of inter-connection between self and others, including the non-human or 'earth' others.[11]

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9 Louis van den Hengel, 'Zoegraphy: Per/Forming Posthuman Lives', *Biography,* **35**, 1 (2012), pp. 1–20. <http://muse.jhu.edu/login?auth=0&type=summary&url=/journals/biography/v035/35.1.van-den-hengel.html> [19 September 2014].

10 Braidotti, *Transpositions*, p. 41.

11 Braidotti, 'Powers of Affirmation: Response to Lisa Baraitser, Patrick Hanafin and Clare Hemmings', *Subjectivity* **3**, 2 (2010) pp. 140–48. <doi:10.1057/sub.2010.10>[2 August 2015], p. 144.

With reference to Braidotti, Van den Hengel describes 'zoegraphy' as an approach to life-writing that is 'not specific to human lifeworlds but cuts across humans, animals, technologies, and things'.[12]

I speculate that this approach would have held some appeal for Wilson himself, and his spiritual philosophy, since he wrote the following regarding his beliefs on what he refers to as 'life':

> Surely when a number of atoms of hydrogen combine with a number of atoms of oxygen to form a certain fixed and definite number of molecules of water, surely they are all carrying on their duties in a truly *organic* manner of life, though on so very limited a scale.[…] Is it not obvious that the *life* all through is the same right up to the infinite complexities of the life of Man? […] call it what you like, so long as you make no distinction between the simplest and most primitive forms of it among gases and fluids, and the latest and most complex forms of it amongst ourselves.[13]

While Wilson invokes the connection between hydrogen and oxygen in water and 'the complexities of Man' to suggest they are both *'life'* but only at different scales, the post-human new materialist understanding thinks of life-forms, including the human, as temporary concretions in flows of becoming. Manuel De Landa puts it thus:

> Our organic bodies are […] nothing but temporary coagulations in these flows: we capture in our bodies a certain portion of the flow at birth, then release it again when we die and micro-organisms transform us into a new batch of raw materials.[14]

Just as life-writing is reconfigured as zoegraphy under this new materialist post-human understanding, so too is history reconfigured. De Landa takes this life scale through to the scale of history. Noting the nineteenth-century 'new awareness of historical process'[15] in the sciences, he points out that 'classical versions of these' incorporated 'a rather weak notion of history'[16] such that 'thermodynamics and Darwinism admitted only one possible historical outcome'.[17] De Landa develops a nonlinear history, referring to the physicist

12 Van den Hengel, 'Zoegraphy: Per/Forming Posthuman Lives', p. 2.

13 George Seaver, *The Faith of Edward Wilson*, p. 42.

14 Manuel De Landa, *A Thousand Years of Nonlinear History* (New York: Swerve, 2014), p. 104.

15 De Landa, *A Thousand Years of Nonlinear History*, p. 13.

16 De Landa, *A Thousand Years of Nonlinear History*, p. 13.

17 De Landa, *A Thousand Years of Nonlinear History*, p. 13.

Arthur Iberall who first offered phase transition as way to consider earlier historical transitions in human culture:

> much as a given chemical compound (water, for example) may exist in several distinct states (solid, liquid, gas) and may switch from stable to stable state at critical points in the intensity of temperature (called phase transitions), so a human society may be seen as a 'material' capable of undergoing these changes of state.[18]

According to De Landa's application of 'phase transition' to history, unilinear progression through stages is mistaken:

> if different 'stages' of human history were indeed brought about by phase transitions, then they are not 'stages' at all – that is, progressive development steps, each better than the previous one, and indeed leaving the previous one behind.[19]

Rather, according to De Landa, new phases that occur after previous phases should be thought of as concurrent, and 'coexisting and interacting' with prior phases 'without leaving them in the past'.[20]

> Moreover, much as a given material may solidify in alternative ways (as ice or snowflake, as crystal or glass), so humanity liquefied and later solidified into different forms.[21]

In nonlinear history and the post-human worldview the classical Cartesian subject of humanism is decentred. With the aid of Braidotti's thinking on nomadic theory, transposition and the posthuman this thesis proceeds with a series of 'decentrings' to refract the 'other' subjectivities implicated in this zoegraphy to mark shifts between mediums, as well as the shifts between phases in a nonlinear history. So there are three modes of refraction here: through other subjectivities, through media, and through the phases of non-linear history.

In this thesis, the unitary rational subject as discrete individual is configured into an embodied materialist subjectivity traversed by affects and forces. This parallels the shift from the notion of the human *in* the environment to the understanding of the human *and* environment. It must be remembered that this is not a new approach in one sense, as cultural geographers were engaged

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18 De Landa, *A Thousand Years of Nonlinear History*, p. 15.

19 De Landa, *A Thousand Years of Nonlinear History*, p. 15–16.

20 De Landa, *A Thousand Years of Nonlinear History*, p. 16.

21 De Landa, *A Thousand Years of Nonlinear History*, p. 16.

in a turn to spatial theory in the late 1980s and 1990s, as found in the work of Edward Soja[22] and Henri Lefebvre,[23] as well as early ecological thinking regarding the environment from the 1960s with the work advocating a holistic view of nature and our relation to it of people such as Gregory Bateson (1904–1980) and James Lovelock, who proposed the Gaia theory of the earth system. But, as Dolphijn and van der Tuin write, the 'new' in new materialism refers not to something different from before in a genealogical progression but rather to a reorientation of metaphysics.[24]

Braidotti calls it a 'geo-centred turn' away from the classical humanist anthropocentric view towards a planetary-centred perspective, in which 'the milieu' or environment takes centre place. Braidotti asks: 'What would a geo-centred subject look like?'[25] Braidotti points out that theories of human-caused climate change 'force us to bring together categories of thought which were until now kept apart not only by disciplinary boundaries – between earth sciences and literature and history, for instance – but also by the anthropocentric bias that has sustained the Humanities'.[26]

In this thesis I propose an interpretative method based upon the optical metaphor of refraction. Refraction is the change in direction and speed of a light wave as it passes through one medium into another. A familiar example of refraction would be the appearance of a spoon in a glass of water: the spoon appears both displaced and distorted. The magnitude of the distortion is compared with the passage of light through a vacuum to give the specific refractive index for that material. For glass the refractive index is 1.57, for ice and water it is 1.3, for air the refractive index is close to 1. A refractive interpretation, in my use of it, maintains this accent on medium, which I take as the embodiments and the material histories of the art works, observational practices in art, science and anthropology, and in their representations. The methodology of refraction pays attention to the traversing of boundaries

22 Edward Soja, *Postmodern Geographies: The Reassertion of Space in Critical Social Theory* (London, New York: Verso, 1989).

23 Henri Lefebvre, *The Production of Space* (Oxford, Mass.: Blackwell, 2000).

24 Dolphijn and van der Tuin, *New Materialism: Interviews & Cartographies*, p. 13.

25 Rosi Braidotti, *The Posthuman* (Cambridge: Polity Press, 2013), p. 81.

26 Braidotti, *The Posthuman,* pp. 160–1.

between subjectivities, media and histories. It also suits a nonlinear model of history such as De Landa's in which phases of culture sit side by side, in concurrent yet distinct states such as solid and liquid.

It is with this new materialist understanding and a methodology of refraction, that I turn to Antarctica through the archive of the Edward Wilson watercolours. The historical context under consideration is bracketed by the life of Edward Wilson, who was born in 1872 and died in 1912. This period of Wilson's life nearly exactly coincides with what the historian Eric Hobsbawm calls the 'Age of Empire'.[27] What I will be exploring in the course of the next chapters are the discourses on sociocultural evolutionism that criss-crossed this period as they intersected with Wilson's life. Behind these debates there stands an enormous glass edifice, using quantities of glass of a previously unthinkable amounts, the Crystal Palace of 1851 (Fig 0.5). I will also be drawing out the influences of this glass architecture upon those discourses.

The historian of anthropology, George Stocking, describes the Crystal Palace as 'a glass cathedral'[28] celebrating trade and industrial production, demonstrating global reach in a double movement which gathered raw materials to the centre and sent products out to the colonies, to ready-made captive consumers. Stocking describes sociocultural evolutionism as the product of 'attempts to understand the cultural experience symbolised by the Crystal Palace'.[29] According to Stocking, sociocultural evolutionism recognised unilinear progression through stages. In terms of cultural anthropology these stages moved through savagery, to barbarism, and then to civilisation; material culture, according to this vision, saw its highest form in industrial capitalism. And, according to Stocking, the ethnological collecting demonstrated evolutionary principles based upon classification, their form 'bear[ing] an obvious resemblance to that employed in judging at the Exhibition'.[30] The displays at the Crystal Palace consisted of the following four categories:

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27 Eric Hobsbawm, *The Age of Empire 1875–1914* (London: Abacus, 2009).

28 George W. Stocking, 'Prologue: A Precipice in Time', *Victorian Anthropology* (London: The Free Press, 1987), p. 1.

29 Stocking, 'Prologue: A Precipice in Time', *Victorian Anthropology,* p. 6.

30 Stocking, 'Prologue: A Precipice in Time', *Victorian Anthropology,* p. 5.

Raw Materials, Machinery, Manufacturers and Fine Art.[31] Profits from Crystal Palace paid partly for the purchase of the site upon which the Natural History Museum, Science Museum and the Victoria & Albert Museum were later built.[32] Many of those items on display at the great Exhibition were later included in the collection of the Victoria and Albert Museum.[33]

The Crystal Palace was cheap and strong.[34] The building itself was made of mass produced interchangeable parts, cast-iron multiples, and moulded pieces, forming a moveable and removable structure, in a multiple, modular method. This frame was covered with a skin of cast plate-glass, 'its sparkling exterior, a tribute to free trade, which had recently encouraged the removal of an excise tax on glass'.[35] Plate glass was a commodity invented in 1848 that had just become affordable owing to the improvements in technologies of production. A green house, a glasshouse, the Palace had been constructed around mature elm trees, and its enclosed breathing spaces containing products from every clime and culture across the globe.

So many of the instruments of modern science, those designed to support observation and experimentation – the telescope, the microscope – have relied upon the use of a lens made of glass. These instruments have in their turn supported a scientific methodology that understands itself as an objective view from nowhere. My point is that these instruments have used a glass lens in order to focus, while naturalising and ignoring that the material reality of the glass both enables that focus and distorts those objects under observation. The beam of light is refracted as it enters the changed densities of ice, glass, water and air. Nor does being in the open air take one beyond mediation and refraction. The medium matters. In this case, I am working with a refractive index that considers the distortions and dislocations of ice.

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31 Victoria and Albert Museum (No date) *Displays and Products from Overseas*, [Online] London, Victoria and Albert Museum, para. 9/9, <http://www.vam.ac.uk/content/articles/t/the-displays-and-products-from-overseas/>[13 August 2015]

32 Victoria and Albert Museum, (No Date) *100 Facts about the V&A,* [Online] London, Victoria and Albert Museum, para. 3/100 <http://www.vam.ac.uk/content/articles/0-9/100-facts-about-the-v-and-a/> [13 August 2015]

33 Victoria and Albert Museum, (No date) *The Great Exhibition*, [Online] London, Victoria and Albert Museum, para.1/15 <http://www.vam.ac.uk/page/g/great-exhibition/>[13 August 2015]

34 Stocking, 'Prologue: A Precipice in Time', *Victorian Anthropology,* p. 1.

35 Stocking, 'Prologue: A Precipice in Time', *Victorian Anthropology,* p. 1.

Through this archival encounter with the frozen continent of Antarctica I propose to make a shift towards an optics derived from ice. This means a visuality in which the refractive index would be climate specific, located, embodied, contextual and material. The optics founded upon ice is one distorted, refracted, changed and challenged by its surrounding atmospheres and climates. No longer the architecture of the era of the Crystal Palace and glass, this optics, derived from ice, supports a world-centred ethics that calls for the architecture of atmospheres.

Fig 0.5

The Archive *Arkive*

The particular focus of this thesis is the Antarctic viewed through the watercolours painted by Wilson. Those watercolours are principally housed in three archives: The Scott Polar Research Institute, Cambridge; The Royal Geographical Society, London; and the Cheltenham Museum and Art Gallery, which, since 2013, has been rebuilt and rebranded as The Wilson. In these archives one does not encounter Antarctica itself, but the Antarctic environment turned into writing, drawings, watercolour paintings, sketchbooks, diaries, letters, photographs, lantern slides, and various ephemera and observations of other sorts. I understand these displaced and distorted interpretations of the Antarctic environment found in the archive to be a kind of *ekphrasis*. *Ekphrasis* commonly refers to the rhetorical technique of describing an artwork, usually a visual work such as painting, through another medium, usually literary.[36] My response to these already ekphrastic forms, through my own artwork and writing, is to create another movement of *ekphrasis*. In my title, 'elsewhere' refers to the geographically distant place Antarctica that lies elsewhere, but it also refers to the movement of *ekphrasis*. I understand *ekphrasis* to entail a refractive movement which I associate with Braidotti's thinking on transposition.

The South Pole as the last 'elsewhere' of the empty places on the map that figured as the prize to heroic explorers, is now a place that cannot be returned to in its undiscovered state. I propose that this 'elsewhere' of undiscovered territory located as a nowhere else of closed possibility, can be turned again – transposed – to become a renewed ethical sensibility of elsewhere.

'Elsewhere' is also identifiable in the trend for artists to go to Polar destinations, taking being there *en plein air* as a mark of authenticity.[37] There is ambivalence involved in the practice of travelling artists who produce carbon emissions in the pursuit of making works that are critical of the production

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36 Merriam Webster dictionary definition of *ekphrasis*: 'a literary description of or commentary on a visual work of art' <http://www.merriam-webster.com/dictionary/ekphrasis> [19 July 2015].

37 See British Antarctic Survey and Arts Council of England Artists and Writers Programme, and the US National Science Foundation Antarctic Artists & Writers Program.

of and warning of the consequences of those same carbon emissions.[38] One argument in favour of ecotourism cites the consciousness-raising that may result and the positive consequences for changes in behaviour, but an equation of cost-benefit must be applied here. There is a larger-scale issue of people's desire to travel, while in denial or ignorance of the damage they are producing in the process.

One does not need to travel in order to leave a footprint. My own art practice has entailed leaving a carbon footprint in the glass-maker's studio. My artworks address the heroic era of Antarctic exploration as I found it in the archive of Wilson's watercolours. Aspects of my resulting works manifest the same ambiguity and ambivalence as can be found in engagements with climate change. 'Elsewhere' then, can also entail a strange transposition of difference, enacted as a repudiation of the crisis of climate change that, as Benjamin Morris and Bradon Smith write, 'localise the problem, but localise it "elsewhere"'.[39] In my view, Braidotti's definition of transposition misses a key aspect, that of the psychic understanding of subjectivity and affect, which includes repression. Thus this thesis aims to supplement her idea of transposition with Sigmund Freud's understanding of *Entstellung*. The reason for this is twofold: in order to try to make manifest the latent in the archive; and also to appreciate *Entstellung* as the movement that is in force in the act of denial, which displaces to elsewhere or to another time that which the subject does not wish to see or know. This, I propose, brings an understanding of what I will call a refracted subjectivity that is missing from Braidotti's account of a decentred subjectivity.

I propose that we think of refraction as the optical correlate to the Freudian term *Entstellung*. The following example offers some insights into their compatibility. As applied to dream interpretation, the method of *Entstellung* attends to the interpretation of the distorted-displaced dream images. Freud mentions the telescope and microscope as similes for the dream process.[40] He then extends the analogy by paying attention to the glass lenses of these

38 I have not calculated a carbon footprint for the production of the works that I have made.

39 Benjamin Morris and Bradon Smith, 'Representing Climate Change', *Bipolar,* ed. by Kathryn Yusoff (London: The Arts Catalyst, 2008), p. 109.

40 Sigmund Freud, *Interpreting Dreams*, p. 554.

instruments; he says:

> the censorship that occurs between two systems would correspond to the refraction that accompanies passage into another medium.[41]

Freud makes a clear analogy between refraction and the passage from the unconscious to the conscious. Psychoanalysis can address the denial of difference. I explore the relation between *Entstellung*, transposition and *ekphrasis* in the third chapter, then apply this psychoanalytical approach in the fourth and fifth chapters as part of my method for making manifest the latent, repressed racialised and gendered subjectivities in the archive of Antarctic heroism.

In the writing of this thesis I have attempted to treat the text as a spatial and material practice, that is, to treat it as a medium with its own refractive index. It is informed and influenced by work such as Jane Rendell's *Site-Writing*[42] in which she argues that art criticism 'is *itself* a form of situated practice'[43] which produces what she terms site-writing 'where the boundary between subjects and objects is more porous and arguments are made not only directly but indirectly through association and implication'.[44] Rendell's form of criticism consists of entanglements with its objects, and is worked through with psychoanalytical paradigms and a poetic sensibility. I interpret Rendell's *Site-Writing* as taking on the practice of *ekphrasis*, not as a mirroring of its objects, but as a refraction that engages with explorations of equivalence and interpretation.[45] Following Rendell's method of writing through different configurations, in which each chapter is a different 'enactment of art criticism as a critical spatial practice',[46] I propose here my own version of a configuration, that I call chiastic *ekphrasis*.

In this thesis I have chosen to work with the optical metaphor of refraction as a mode of operation for my art practice but also my writing. The writing of the thesis takes this on through the form of chiastic *ekphrasis*. The thesis

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41 Freud, *Interpreting Dreams*, p. 627.

42 Jane Rendell, *Site-Writing: The Architecture of Art Criticism* (London, New York: I.B. Taurus, 2010).

43 Rendell, *Site-Writing*, p. 2.

44 Rendell, *Site-Writing*, p. 2.

45 Rendell, *Site-Writing*, pp. 5–6.

46 Rendell, *Site-Writing*, p. 18.

performs refraction as a form of *ekphrasis*; where one form is reworked in another form, for example the translation of a visual experience into a written one, or the presentation of a work of art in a vivid verbal description, in both of these there is a refractive shift between mediums. This refractive move can also be written as a transposition understood as a shift in coordinates. This I link to the chiastic pattern of a literary construction that follows a repetition in the pattern of A, B, C, X, C', B', A'. As in this literary chiastic repetition where the themes or motifs of a literary work are revisited and reworked, the writing here is structured as a series of encounters which on the return meet again with what was already encountered on the outward-bound phase. Corresponding sections create an interplay, such as that they are can be read refractively through each other. A chiasmus turns around the conceptual pivot at the centre.

The chapters are written to follow this chiastic structure: the prologue 'Glass' is paired with the epilogue 'Ice', the first chapter 'Elsewhere' is paired with the last 'Where Else' and the second 'Watercolour' with the fourth and penultimate 'The Colour of Water', with the chiastic turn occurring half way through the third or middle chapter 'Antarctica Through the Archive'. Each chapter is constructed out of subtitled sections. Each section is paired with another on the pattern of the chiasmus, where the theme encountered on the way out is met on the return in a transposed, *entstellt*, refracted version. For example, this section titled 'Archive' is paired with the section in the epilogue titled 'Arkive'.

The sections can be categorised as different types: some are historical, some theoretical, some anecdotal or essayistic, some are descriptions of practice. The topic under consideration can be approached through these different methods and forms of writing and will be revealed differently as a consequence. The motive is to allow the language used in the descriptions to become apparent, but to do this through the shifts between one mode and another so as to track it in the writing as one might follow the refractive shift between media. This approach is comparable to turning one's attention to the materiality of the lens in use in one's instruments of observation.

Each written section is followed by one or more images. These images do not reflect the content of the written section that comes before or after them

but rather refract the reader along to the next section. So the refractive optic does not only operate through the artworks and through the writing but also happens in the image-text relation within the composition of the thesis. There is also a temporal pattern of anticipation and retrospection at work in the way in which the images either show what is to come or what has already been read in the writing. The images also function as ekphrastic interpretations of the written sections, which are then also an ekphrasis of the neighbouring images. The images function as part of the chiastic structure of *ekphrasis* as there is on occasions a chiastic pairing of images within the thesis that transpose connections across chapters, creating bigger patterns of anticipation and retrospection.

The figures are a combination of reproductions of archival material such as photographs, watercolours, drawings, lantern slides, journal or catalogue book pages, notebooks and sketchbooks, and documentation of my own works. The figures have, on occasion, been reproduced as facsimile versions of the 'original', made to imitate the sensation and dimension of paper, or the paper quality, of orientation, of colour. This is another way in which to pay attention to the transposition of medium in the process of reproduction. The images are refracted through different processes of reproduction, for example from drawn image to printed collotype. At points, the encounter with these elements can be considered to be another form of *ekphrasis* in which the sensation of sifting through the leaves of a boxed archive case, or turning the pages of one of Wilson's sketchbooks, is described and performed.

The first chapter, 'Elsewhere', considers the historical context of Wilson's life and the rise in practices of fieldwork, discernible in Victorian handbooks to aid observation in the field, such as the British Association for the Advancement

of Science's *Notes and Queries*[47] to support ethnographic observation, and the Royal Geographical Society's *Hints to Travellers*[48]. The human and the environment are explored through the history of Antarctic exploration, geology and anthropology to produce temporal and spatial understandings of elsewhere.

The second chapter, 'Watercolour', considers watercolour's material history as both practice and medium. The particular techniques applied by Wilson, along with Ruskin and Turner's influence upon him, are considered; the fugacity and permanence of pigments, the reflective and refractive qualities of the paint; and its evolution as a medium. The chapter, through developing an understanding of how watercolour as a pigment relies upon the medium's vehicle and the medium's surrounding atmosphere for its effects, extends this to interpret the significance of medium, in a wider context, as climate.

The writing turns around and through the third chapter, 'Antarctica through the Archive'. The inseparability of observer and observed is explored in *The Antarctic Manual for Meteorological Observations* 1901, and in the relation between taking observations and writing them down. I apply Freud's *Entstellung* as a shift elsewhere, to consider the gaps in observation caused

47 Lane Fox, Augustus Henry, (ed.), *Notes and Queries on Anthropology for the Use of Travellers and Residents in Uncivilized Lands,* 1st edn, (London: Edward Stanford, 1874), Hereafter shortened to *Notes and Queries,* 1st edn.; John Garson and Charles Read, (eds), *Notes and Queries on Anthropology or a Guide to Anthropological Research for the Use of Travellers and Others,* 2nd edn, (London: Royal Anthropological Institute of Great Britain and Ireland, 1892): John Garson and Charles Read (eds.), *Notes and Queries on Anthropology,* 3rd edn, (London: The Anthropological Institute, 1899): Freire-Marreco, Barbara, and John Linton Myres, (eds.), *Notes and Queries on Anthropology,* 4th edn, (London: Royal Anthropological Institute, 1912): The British Association for the Advancement of Science, Committee of Section H, (eds.), *Notes and Queries on Anthropology,* 5th edn, (London: The Anthropological Institute, 1929).

48 *Hints to Travellers*, *Journal of the RGS*, **XXIV,** pp. 328–29, London (1854); George Back, Richard Collinson and Francis Galton, (eds.), *Hints to Travellers*, 2nd edn (London: The Royal Geographical Society, 1865); George Back, Richard Collinson and Francis Galton, (eds.), *Hints to Travellers*, 3rd edn (London: The Royal Geographical Society, 1871); George Back, Richard Collinson, and Francis Galton, (eds.), *Hints to Travellers*, 4th edn (London: The Royal Geographical Society, 1878); D. W. Freshfield, H. H. Godwen-Austen and J.K. Laughton, (eds.), *Hints to Travellers,* 5th edn, (London: The Royal Geographical Society, 1883); D. W. Freshfield and W. J. L, Wharton, (eds.), *Hints to Travellers,* 6th edn, (London: The Royal Geographical Society, 1889); Freshfield D.W., and Captain E.J. Wharton et al., (eds.), *Hints to Travellers*, 7th edn (London: The Royal Geographical Society, 1893): John Coles, (eds.), *Hints to Travellers*, 8th edn (London: The Royal Geographical Society, 1901); ed. Reeves, E. A., (eds.), *Hints to Travellers*, 9th edn (London: The Royal Geographical Society, 1906). Reeves, E. A., (eds.), *Hints to Travellers*, 10th edn (London: The Royal Geographical Society, 1921).

by denial or disavowal of what is observed. The combined methodology of refraction, *Entstellung* and chiastic *ekphrasis* is the object of study in this chapter. The chiasmus in the pattern of polar sledge journey is read through other chiasmi. I argue for the form of the chiasmus that best suits my refractive method, which I define in terms of an axis of transposition, that supports interpretative shifts across boundaries and between media: the ekphrastic move.

In the fourth chapter, 'watercolour' is transposed to 'The Colour of Water'. Here I look at anthropologist Franz Boas's move from a more empirical physics-based investigation of the colour of water, to one that questioned the fixity of colour through his work on the anthropology of race. Typologies of race in museum display and architecture are read refractively through Wilson's sledging diary to the South Pole, which he wrote over anthropological drawings and medical texts in the pages of a Wellcome Medical Diary and Visiting List of 1910. The architectural design for a museum display of ethnographic material is interpreted to reveal the denial of atmosphere with regard to the relation between human and environment.

In the final chapter by interpreting the latent feminine in the archive of Antarctic exploration, transposition is explored as the shift performed in sexual difference and as becoming other. The body of the penguin provides a trope for this becoming other. With a feminist perspective and through accounts of re-enacted lectures, lantern-slide projections, and anticipation of the future in the historical accounts of science fiction in the *South Polar Times* the latency of the past and future within the present is interpreted. This chapter transposes 'elsewhere' into 'where else' by refracting new interpretations for the future out of the archive.

In the epilogue the 'Archive' of the prologue becomes 'Arkive' as a place for generative making rather than preservation of extinct specimens; an architecture and optics derived from 'Glass' is transposed through a post-human shift to become a geocentred, atmospheric architecture and optics derived from 'Ice'. It ends where it started with 'Notes From the Field' taken in the glassmaker's studio becoming 'Field Notes' made during a visit to the archive.

Fig 0.6

Chapter One *Chapter Five*
Elsewhere *Where Else*

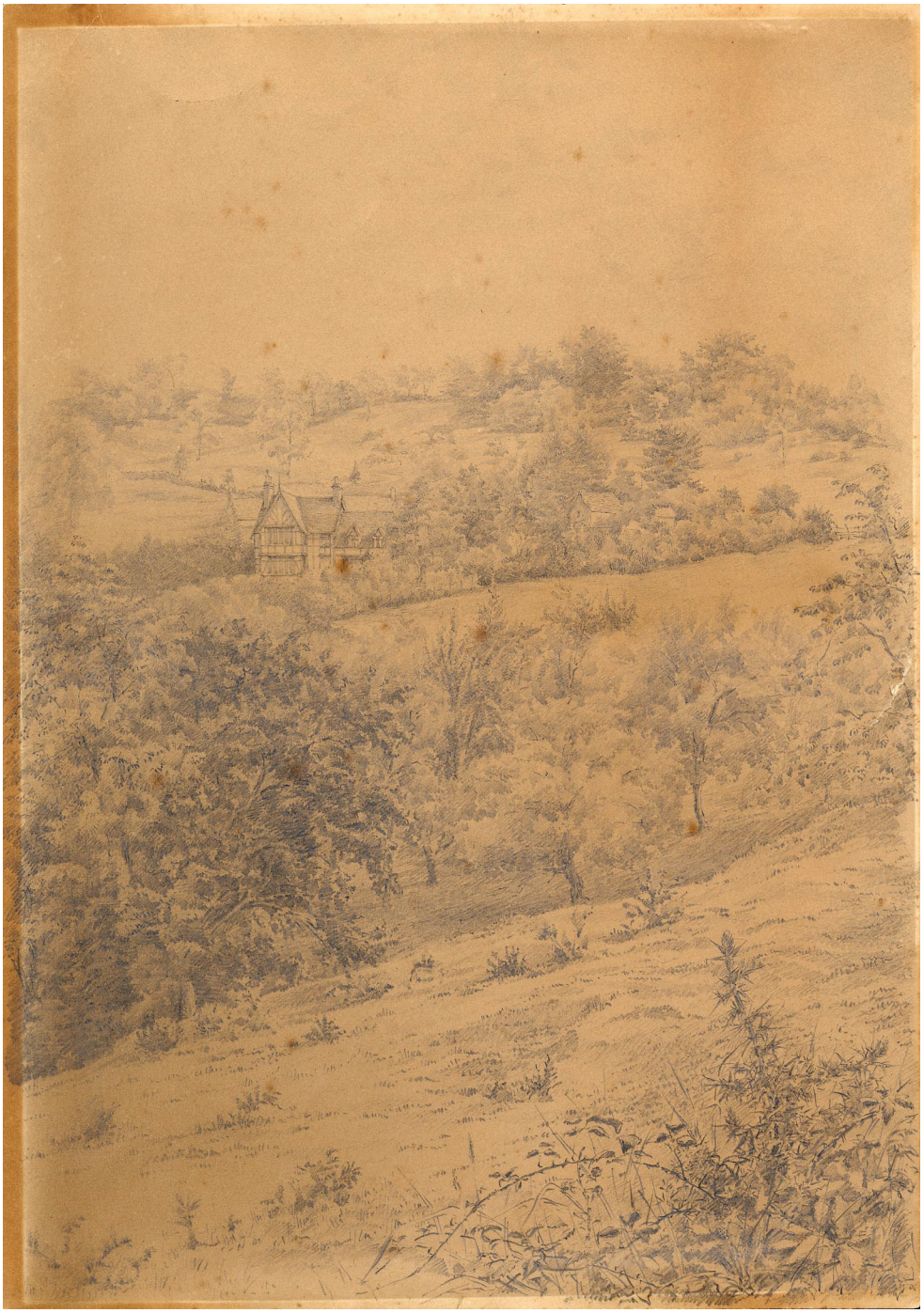

Fig 1.1

The Crippetts and Elsewhere *With a hope*

In this thesis, 'No more elsewhere' refers to the moment in history, in the early twentieth century, when geographical exploration took a turn, the end of what historical geographer Felix Driver refers to as 'Geography Militant'.[49] According to Driver, 'The romance of exploration led inexorably to disenchantment', in that after the entire surface of the globe had been discovered there followed 'the irreversible closure of the epoch of open spaces, the end of an era of unashamed heroism'.[50]

Attaining the South Pole seemed to bring this ultimate and final elsewhere under the scope of the 'here'. 'No more elsewhere' refers to a world after this time. Driver points out that these types of tale of nostalgic longing are recurrent.[51] The attainment of the South Pole is one episode in a continuing history of turns, but it is the one that is the focus of my inquiry here. My work on elsewhere in this thesis is to shift Driver's historical geography of the exploration of elsewhere into elsewhere as a refractive method for interpreting the archive of heroic Antarctic exploration.

Edward Adrian Wilson was born in 1872 into the world of a middle-class doctor's family in Cheltenham. Wilson travelled with the two British Antarctic Expeditions, *Discovery* (1901–1904) and *Terra Nova* (1910–1913). He was the accomplished watercolour artist, naturalist and doctor, and was the second expedition's Chief of Science. In setting out in 1912 on the southern journey to the pole, Wilson and his party anticipated the attainment of the last major prize of exploration of global territory, but they arrived too late. The closing chapter of Wilson's life, his death with Scott on their return trek after their failed attempt to be first to the South Pole, has become, in so many accounts, the defining moment of his biography. Although many of the best stories end badly, that is with the absolute closure of death, and in accordance

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49 Felix Driver, *Geography Militant: Cultures of Exploration and Empire* (London, Massachusetts: Blackwell, 2001). Driver takes his title from an essay by Joseph Conrad, reprinted in 1924, 'Geography and Some Explorers', *National Geographic,* **45,** 3 (1924). See also Felix Driver, 'Geography's Empire: Histories of Geographical Knowledge', *Environment and Planning D: Society and Space,* **10** (1992), pp. 23–40, pp. 23–4.

50 Driver, *Geography Militant: Cultures of Exploration and Empire*, p. 4.

51 Driver, *Geography Militant: Cultures of Exploration and Empire*, pp. 4–5.

with the vision of subject as an individual, the narrative I wish to construct in this thesis will not be told in that biographical mode. Rather it questions, as Adriano Cavarero calls it, 'the desire for unity, which gets doubly satisfied by death – whether as the final chapter of the tale, or as the summarizing gaze that watches the story'.[52] My narrative here, following Rosi Braidotti, aims to remove the 'horizon of death'.[53] Braidotti's writing on transposition, and Sigmund Freud's *Entstellung,* a method of dream interpretation he invented, are drawn together in this thesis to create my process of refractive *ekphrasis*, which aims to produce another interpretation of Antarctica – transposed and ekphrastic – through the archive of Wilson's watercolours.

The following anecdote of self-analysis that Freud provided as he approached his own death as horizon,[54] is relevant to Wilson's story as I engage with it here. Nearing what Freud expected to be the end of his life he wrote an open letter to his friend and correspondent Romain Rolland titled 'A Disturbance of Memory on the Acropolis'.[55] Freud introduced the letter by saying that he offered it as a gift, but from one who 'has seen better days', likening himself to the ruin that furnished him with the experience he narrates. He begins with the image of the heroic explorer:

> When first one catches sight of the sea, crosses the ocean and experiences as realities cities and lands which for so long had been distant, unattainable things of desire – one feels oneself like a hero who has performed deeds of improbable greatness.[56]

He was 48 years old at the time of this experience, and recalled the deep felt ambition he had to travel when he was a child and young man but with little opportunity for its realisation. Freud recalls here the unattainable lure of travel that had represented to him the possibility of transcending the limitations of the impoverished horizons of his childhood and youth, and the feeling of incredulity that such a place as Athens should ever be available to

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52 Adriana Cavarero, *Relating Narratives: Storytelling and Selfhood* (London, New York: Routledge, 2000), p. 44.

53 Braidotti, *The Posthuman,* p. 132.

54 Braidotti, *The Posthuman*, p. 132.

55 Sigmund Freud, 'A Disturbance of Memory on the Acropolis', in *On Metapsychology: The Theory of Psychoanalysis* (London: Penguin Books, 1984), pp. 447–56.

56 Freud, 'A Disturbance of Memory on the Acropolis', p. 455.

him – not that it did not exist but that it could not exist for him. Yet when Freud encountered the unexpected opportunity to travel to Athens and see the Acropolis he was first struck with depression in anticipation of his departure on the last leg of his journey. Freud interprets an underlying process at work:

> 'what I see here is not real'. Such a feeling is known as a feeling of derealization'[Entfremdungsgefühl]. I made an attempt to ward that feeling off, and succeeded, at the cost of making a false pronouncement about the past.[57]

Freud goes on to make a relation between the negative refusal of a fact experienced in derealisation and what he calls their 'positive counterparts' – such as 'déjà vu'.[58] Freud explains that derealisations have a 'dependence upon the past' and that Freud's incident illustrates this 'disturbance of memory and falsification of the past':[59]

> It is not true that in my school days I ever doubted whether I should see Athens. It seemed to me to be beyond the realm of possibility that I should travel so far – that I should 'go such a long way'.[60]

Freud describes a double-sided response which he characterises as produced by a divided person within himself – one responding 'as though he were obliged, under the impact of unequivocal observation, to believe in something the reality of which had hitherto seemed doubtful',[61] the other surprised at the disbelief of the first. Freud asserts that 'incredulity of this kind is obviously an attempt to repudiate a piece of reality'.[62]

Although 'A Disturbance of Memory on the Acropolis' does not recount a dream, Freud treats it as though it were a kind of dream and applies to it his methods of dream interpretation, including *Entstellung*, in order to interpret the latent content underlying the manifest content of the memory-experience. Pertinent to my inquiry here are Freud's understandings of disturbances to

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57 Freud, 'A Disturbance of Memory on the Acropolis', p. 453.

58 Freud, 'A Disturbance of Memory on the Acropolis', p. 453. Jane Rendell explores déjà vu in one of the *Site-Writing* configurations and refers to 'A Disturbance of Memory on the Acropolis': 'Déjà Vu examines the spatial structure of unconscious hiding or folded memory', Jane Rendell, *Site-Writing,* p. 155.

59 Freud, 'A Disturbance of Memory on the Acropolis', p. 455.

60 Freud, 'A Disturbance of Memory on the Acropolis', p. 455.

61 Freud, 'A Disturbance of Memory on the Acropolis', p. 449.

62 Freud, 'A Disturbance of Memory on the Acropolis', p. 450.

observation, and the methods he supplies to comprehend what is at play in the disavowal and denial of observable facts when one cannot or will not believe one's eyes – whether what one sees is hoped for (déjà vu) – or feared (derealisation). Also pertinent is the process of 'falsification of the past' of which Freud gives an account. It is this attentiveness to Freud's insights into observation and the recollection of the past that I bring to the archive of Wilson's watercolours and the historical context of his life.

The first chapter of Wilson's biography, titled 'The Crippetts and Elsewhere', recounts the part of his boyhood spent on the farm in the Cotswold Hills near Leckhampton, Gloucestershire:

> It is one of those still unspoiled corners, even in these days, of the Cotswold Hills, where birds can build unmolested, and wild flowers bloom, and creatures burrow and roam.[63]

There, in the English countryside, he developed his passion for collecting natural history specimens, which has been linked to his enthusiasm for making 'patient and accurate delineation of them in form and colour'.[64] A pencil drawing dated 1895 and tilted *The Crippetts* illustrates both Wilson's naturalistic drawing skills and the pastoral charm of this place (Fig 1.1).

A few years later, in 1899–1900, he wrote with nostalgia for an era before the immense changes wrought by Victorian industrialisation and contemplated feeling somewhat at odds with his own time:

> Oh, think what England's country was one hundred years ago. I always feel as though I belong really to a century ago in all my likings: I don't feel built at all for to-day's bustle and push and railways and breech-loaders.[65]

In the above quote Wilson's nostalgia for an earlier time is a temporal displacement. So too is there a temporal displacement in my understanding of 'No more elsewhere'. It combines a spatial relation to what is not 'here' with a temporal one of 'no more'. What is 'no more' is the epoch of global exploration, epitomised and culminating in the Heroic Age of Antarctic Exploration, which took place around the last few years of the nineteenth and the first

63 George Seaver, *Edward Wilson Nature-Lover*, p. 2. Wilson's mother began renting this farm from 1885 when Wilson turned thirteen.

64 Seaver, *Edward Wilson Nature-Lover*, p. 2.

65 Wilson writing to Oriana Souper, his future wife, between November 1899 and May 1900, quoted in Seaver, *Edward Wilson Nature-Lover*, p. 79.

few decades of the twentieth century. In this writing, the time of Wilson's biography and the historical context in which he lived are understood spatially as 'elsewheres'. These historical elsewheres are to be understood in relation to the geographical elsewhere of Antarctica, as it constituted an unmapped territory at that time.

In what follows, my readings of elsewhere along with my account of Wilson's life through his watercolours and archive, aim to create recursive patterns, cross-overs and refractions so that the narrative does not lead inexorably from the Crippetts to an Antarctic landscape in which Wilson finds his end (Fig 1.2), but crosses back and forth, between different times and places. Rather than heading towards Wilson's death in Antarctica as the final episode in the final chapter, this narrative opens up to the elsewhere of the future.

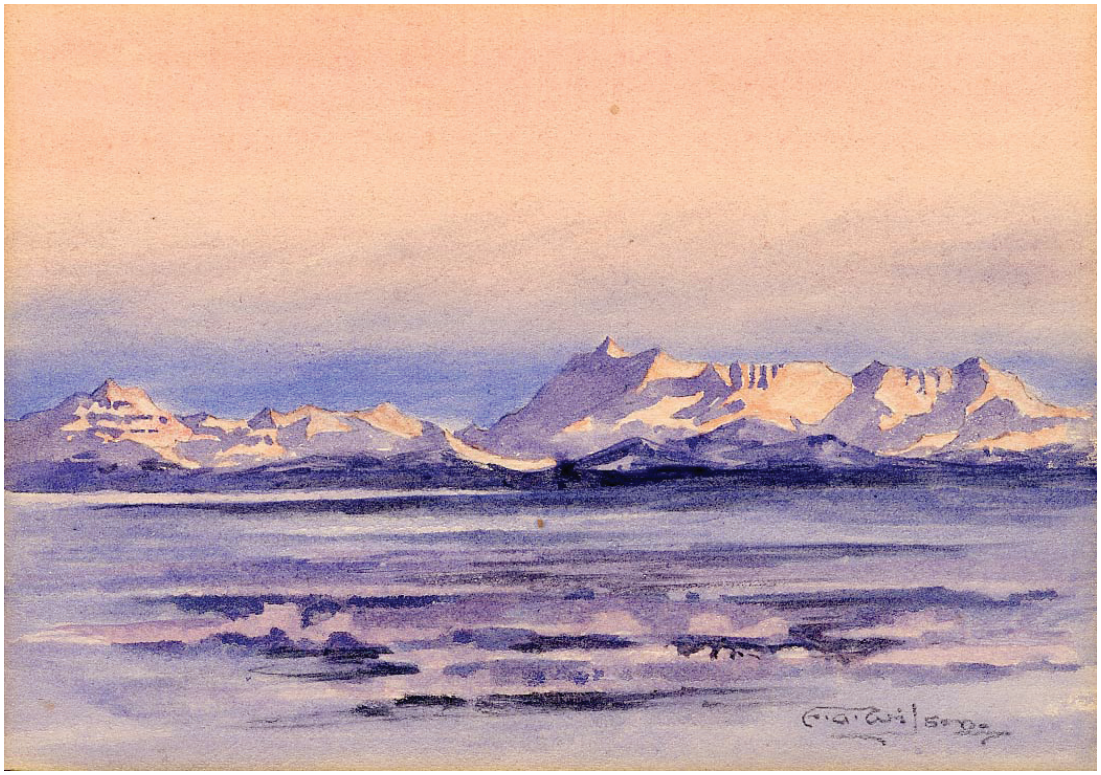
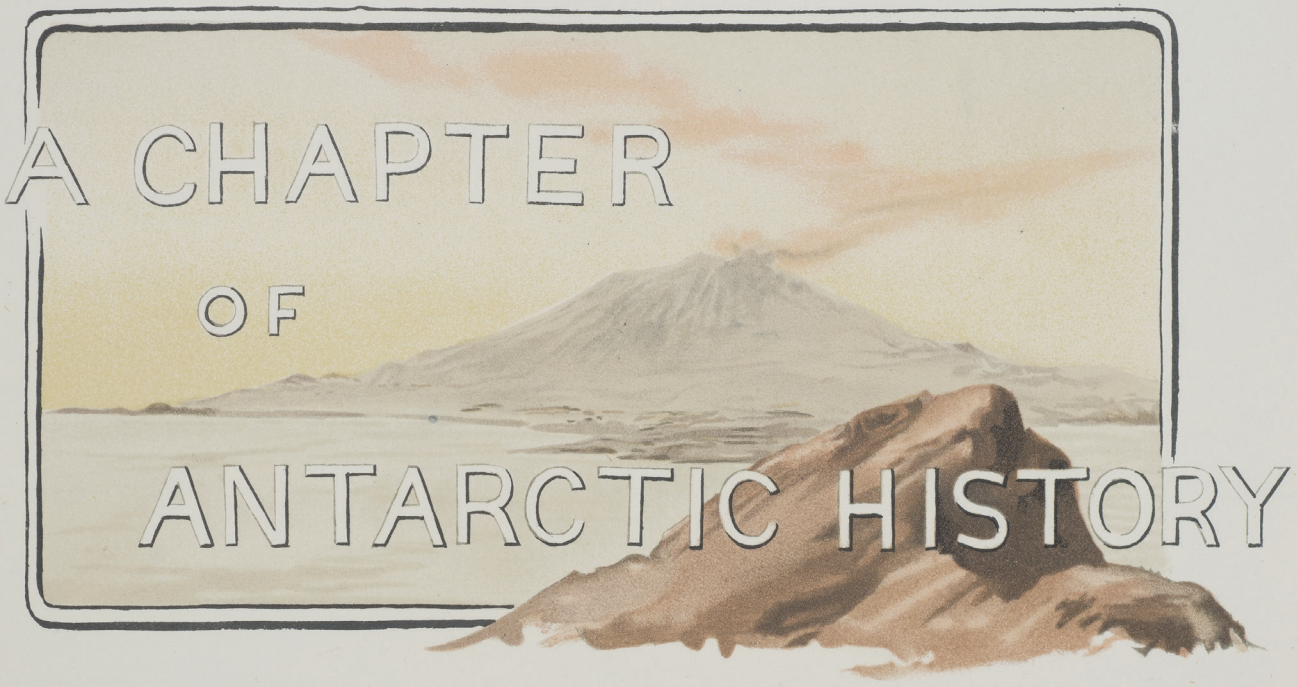


Fig 1.2

Next Fig 1.3



Ross Island lies about two thousand miles south of New Zealand, and on the same meridian. It has very much the shape of Sicily, and like the latter is dominated by a huge volcanic cone, still far from dormant. But unlike that island it is only forty miles long and is composed exclusively of volcanic material. We are therefore unable to do more than guess at its past history, for no fossils,-- telling us of inundations by the sea, or of bygone river floods during readily determinable periods, can reasonably be expected to occur on the island.

These volcanic lavas tell us something however of the past history of MacMurdo Sound. But let us first

A Chapter of Antarctic History *Some Fragments*

> The exploration of the Antarctic region is the greatest piece of geographical exploration still to be undertaken.[66]

In 1895, the meeting of the International Geographical Congress urged the scientific communities around the world to take up this challenge. One account defines this period as 'The Age of Attainment' in which 'the poles of the earth were reached and most of the objects that explorers have been seeking were found'.[67] The language of possession and attainment is to be found in other examples. On reaching furthest south 88° 23' South, longitude 162° East, only 97 miles from the Pole, Shackleton wrote in 1909: 'we took possession of the plateau in the name of His Majesty'.[68] Shackleton's experience of the route gave the model for Scott's subsequent race for the Pole against Roald Amundsen of Norway in 1911–12. Amundsen wrote: 'So we arrived, and were able to raise our flag at the geographical South Pole – King Håkon VII's Vidda. Thanks be to God!'[69] To attain, conquer, possess and claim were the verbs frequently used in relation to Polar exploration, and the South Pole was the last remaining prize.

The two expeditions that Wilson joined, both led by Scott, are two of the best-known and most significant expeditions of the heroic age of Antarctic exploration, and they contributed a great part to this chapter of Antarctic history. The degree of awareness that the expedition members had for their place in history can be read in the pages of the *South Polar Times*, the hand illustrated and typed, spoof periodical consisting of poetry, and humorous and informative essays written and illustrated by the expedition party. It circulated during the dark winters for the amusement of the expedition members, and all

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66 Bouquet de la Grye, M. et al, '3. Antartic Exploration' in 'Resolutions Considered and Passed by the Sixth International Geographical Congrers', *Report of the 6th International Geographical Congress, Held in London 1895* (London: John Murray, 1896), pp. 779-87, p. 780.

67 Augustine Courtauld, *From the Ends of the Earth: An Anthology of Polar Writings Found by Augustine Courtauld*, ed. by Augustine Courtauld (London: Oxford University Press, 1958), preface.

68 Courtauld, ed., *From the Ends of the Earth,* pp. 319–20.

69 Roald Amundsen cited in Roland Huntford, *Race for the South Pole: The Expedition Diaries of Scott and Amundsen* (London, New York: Continuum, 2010), p. 183.

were subsequently published. The following extract comes from Captain Scott's introduction to the publication of the *South Polar Times* in 1907:

> The owner of these volumes will possess an exact reproduction of the original 'South Polar Times' which appeared month by month during the winters of 1902-1903, produced as they were for the sole edification of our small company of explorers in the 'Discovery,' then held fast in the Antarctic ice.[70]

Although he claims that the *South Polar Times* was written only for their own consumption, the subsequent publication certainly suggests that the contributors might have had their eye on posterity. The contributors to the second expedition's third volume of the *South Polar Times* would certainly have anticipated its publication as they wrote it.

Overall, the production of *South Polar Times* saw four seasons in total across two separate expeditions. The first winter of 1902 produced five editions, the second winter of 1903 three editions from April to August; the third season took place during the *Terra Nova* expedition 1910–1913 and constituted the Third Volume, comprising three editions covering the longer period of April to October 1911. The fourth edition was produced in one edition 'produced by the main party of Scott's Antarctic Expedition at Cape Evans' published on 'Midwinter day 1912'.[71] The fourth volume lacked contributions from Wilson and Ponting, so was visually much the poorer, and not of a comparable standard to the others, so a facsimile was not produced in 1914. Nearly one hundred years later, in 2010, the Scott Polar Research Institute published a facsimile of the fourth volume.[72] Apsley Cherry-Garrard was editor, and it was largely illustrated by him, also with some further illustration by Frank Debenham. It was produced when the fate of the Pole Party and the Northern Party was still unknown. In the note added by Debenham dated 30th September 1959 he writes that 'It is noticeable that there is no reference whatever to the fate of the personnel of the Pole Party, even of the Northern

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70 *The South Polar Times,* Vol. I, ed. by Robert Falcon Scott, Ernest Schackleton, Charles Bernacchi (London: Smith, Elder, & Co.,1907), p. v.

71 Cambridge, Scott Polar Research Institute (SPRI), MS *South Polar Times,* Vol. IV, Accession: MS 505/4.

72 *The South Polar Times; First Facsimile of the South Polar Times,* Vol. IV, ed. by Apsley Cherry-Garrard, Frank Debenham, Anne Savours (Cambridge, Scott Polar Research Institute in association with J. & S.L. Bonham, 2010) [no page numbers in facsimile].

Party though the preparations for the Search next sledging season was the main pre-occupation of all hands'.[73]

In these volumes a declining frequency is notable; the first winter produced it monthly, the second winter managed one every six or seven weeks, the third volume just over bimonthly, and the fourth only once. The first three publications were then printed single-sided on gilt-edged paper, and included full colour reproductions of the original watercolours and dropped-in photographic plates.[74] The publication of the third volume imitated the fount of the original typescript with double-spaced type printed in royal blue ink with crimson superscript indicating footnotes to the in-jokes and nicknames that filled the pages. The first two volumes do not have this endnote elucidation but have instead a key listing the contributors' *noms de plume*.

Each edition of the *South Polar Times* contains lists of notable events of the preceding month, including the topics of debates. During their first winter 1902 the decline of empire and the rise of women were notable concerns.

> May 2nd Debate on Women's Rights. May 2nd Heavy gale. May 6th Debate on Whether the Commercial Supremacy of the British Empire is being maintained or not? May 13th Debate on "The probable weather conditions during the Winter at our Winter Quarters'. May 20th Debate on "Would conscription be beneficial to the British Empire or not?'[75]

Later debates followed 'on seals', and on 'Sport and its effect on Nations'.[76] Then in June after a 'concert and theatricals' the debate topics leave behind concerns of home to become increasingly orientated towards the Antarctic. July saw debates on 'Ice navigation', 'Sledge Travelling' and 'Penguins'.[77] August had no debates listed in 'monthly events' but rather a list of anniversaries, and the return of the sun with the associated commemoration dinner.[78] The events

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73 Debenham in *The South Polar Times; First Facsimile of the South Polar Times*, Vol. IV.

74 *South Polar Times*, Vol. 1, ed. by Robert Falcon Scott, Ernest Schackleton, Louis Bernacchi [April to August 1902] (London: Smith, Elder, & Co., 1907); *South Polar Times*, Vol. 2, ed. by Louis Bernacchi [April to August 1903] (London: Smith, Elder, & Co., 1907); *South Polar Times*, Vol. 3, ed. by Apsley Cherry-Garrard (London: Smith Elder, & Co., 1914) [April to August 1911].

75 'Events of the month', *South Polar Times,* Vol. 1, part II, p. 45, [May 1902].

76 'Events of the month', *South Polar Times,* Vol. 1, part III, p. 18, [June 1902].

77 'Events of the month', *South Polar Times*, Vol. 1, part IV, p. 44, [July 1902]

78 'Monthly Events', *South Polar Times,* Vol. 1, part V, p. 13, [August 1902]

of the month for the next volume do not list debates but rather a growing number of birthdays, anniversaries and puppies being born, with notes taken of expedition dates. The party was isolated from news from the outside world during their stay in Antarctica, reliant upon the relief ship *Morning* visiting the next summer of January 1903 to bring personal letters and news of home.[79]

The first two volumes from the *Discovery* expedition have more frequent educational or factual essays. The topics included 'Polar Plant Life'[80] 'Bird Catching at Sea',[81] 'The Eschenhagen Magnetic Instruments and the Magnetic Variations and Disturbances that they Record',[82] 'Ballooning in the Antarctic',[83] 'Some Remarks on the Geology of the Neighbourhood',[84] and 'Sea Ice'.[85] Wilson contributed natural history submissions on 'Antarctic Seals',[86] 'Whales',[87] 'Some Notes on some Antarctic Birds',[88] and 'Some Notes on Penguins'.[89] Other contributors added their thoughts and knowledge in articles titled 'Some Physical Observations',[90] and 'The Weather'.[91] The second winter included 'Meteorology',[92] and 'notes on horticulture'[93] describing the experiment of growing salads, 'the first crops grown up in Antarctic soil' under the Ward-room sky lights, and an account of the 'The Southern Sledge Journey 1902–1903'[94] undertaken by Scott, Shackleton and Wilson.

The self-conscious awareness that some of the contributions demonstrated of the expedition's sense of its own place in the history of Antarctic exploration

79 Bernacchi, 'Editorial', *South Polar Times*, Vol. 2.
80 *South Polar Times*, Vol. 1, part I, p. 8.
81 *South Polar Times*, Vol. 1, part II, p. 21.
82 *South Polar Times*, Vol. 1, part II, p. 30–37.
83 *South Polar Times*, Vol. 1, part III, p. 2–8.
84 *South Polar Times*, Vol. 1, part III, p. 22-25.
85 *South Polar Times*, Vol. 1, part V, p. 15.
86 *South Polar Times*, Vol. 1, part III, p. 39–44.
87 *South Polar Times*, Vol. 1, part V, p. 42.
88 *South Polar Times*, Vol. 2, part VIII, p. 46.
89 *South Polar Times*, Vol. 1, part IV, pp. 4–9.
90 *South Polar Times*, Vol. 2, part VIII, pp. 32–43.
91 *South Polar Times*, Vol. 2, part VIII, p. 54.
92 *South Polar Times*, Vol. 2, part VI, p. 3.
93 *South Polar Times*, Vol. 2, part VII, pp. 17–18.
94 *South Polar Times*, Vol. 2, part VII, pp. 3–29.

was mixed with historical concerns of another dimension. The contribution by Thomas Griffith Taylor to the third volume of the *South Polar Times* dealt with Antarctic history on a geological scale. Titled 'A Chapter of Antarctic History'[95] (Fig 1.3) the author begins with the description of the hypotheses of the geological history of the continent: 'A cold wave enveloped the earth and ice caps crept down from the Poles'.[96] Taylor goes on to imagine the outcomes of a warming climate:

> At Cape Evans mountaineers will land to tackle Mount Erebus, and aeroplanists will descend for refreshment on their arrival form New Zealand. The less energetic will proceed in the comfortable steamers of the Antarctic Exploitation Company to the chalets of the Beardmore. Here start the summer motor trips to the South Pole. When? Judging the future by the past about 200,000 A.D.[97]

95 Thomas Griffith Taylor 'A Chapter of Antarctic History', *South Polar Times,* Vol. 3, part I, p.5–15.

96 Griffith Taylor, *South Polar Times*, Vol. 3, part I, p.14.

97 Griffith Taylor, *South Polar Times,* Vol. 3, part I, p.15.

Fig 1.4

> the earth, considered from our earliest childhood as the type of solidity, has oscillated like a thin crust beneath our feet; and in seeing the laboured works of man in a moment overthrown, we feel the insignificance of his boasted power.[98]

These comments on geology made by Charles Darwin in *Journal and Remarks: The Voyage of the Beagle* tell of the temporal incommensurability of the history of man with earth history. Darwin's theory of evolution was to provoke for his readers the very same historical conundrum of how to read human history into natural history when their temporalities seemed so at odds.

It was Wilson's reading of Darwin's *Journal and Remarks: The Voyage of the Beagle* that had prompted him to begin to keep his own journal from 1889 onwards, the beginnings of his own methodological practice.[99]

> During his schooldays each week was made to occupy a page, tabulated under the several days and subjects to include notes on temperature and wind, birds and insects, zoology and botany, and miscellaneous.[100]

Wilson's desire to travel may also have been spurred on by Darwin's closing words in the same book, in which he concludes 'that nothing can be more improving to a young naturalist, than a journey in distant countries'.[101]

During the nineteenth century advances in geology and natural history had opened time past backwards into astonishing extensions of prehistory.[102] According to the new geological understanding, the records in the rock strata provided proof of a past way beyond the bounds of the mere six thousand years of the biblical creation myth. The striations of geological rock in one location,

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98 Charles Darwin, *Journal of Researches into the Geology and Natural History of the Various Countries Visited by the HMS Beagle under the Command of Captain Fitzroy RN from 1832 to 1836* (London: Henry Colburn, 1839), p. 554.

99 'From these [diaries] it can be gathered, *inter alia*, that he read Wallace's *Naturalist on the Amazon*, *The Malay Archipelago*, and *Darwinism*.' George Seaver, *Edward Wilson of the Antarctic,* p. 8.

100 Seaver, *Edward Wilson of the Antarctic,* p. 8.

101 Darwin, *Journal of Researches,* p. 607.

102 Charles Lyell, *The Geological Evidences of the Antiquity of Man, with Remarks on Theories of the Origin of Species by Variation* (London: John Murray, 1863). For a discussion of the nineteenth-century debates on the age of the planet see 'The Past' in Stephen Kern, *The Culture of Time and Space 1880–1918* (Cambridge, Mass.,: Harvard University Press, 2003), pp. 36–38.

and the global distribution of similar types across the lithosphere,[103] told a story of the planet's history that was one of change and process, over millions of years, and testified against the intelligent design of God's own creation. *Principles of Geology: Being an Attempt to Explain the Former Changes of the Earth's Surface by Reference to Causes now in Operation* by Charles Lyell (1797–1875) (a copy of which Darwin took with him on his voyage on the Beagle, dedicating his own subsequent book to Lyell) was published in three volumes from 1830 to 1833 and provided interpretation of the geological and fossil record.[104] Geological knowledge and speculation were key to the development of Darwin's theory of evolution, as was the fossil record to be found written in those strata.

Geology and fossil-finding contributed significantly to the nineteenth century's huge expansion of knowledge. There was a concurrent hope that this knowledge would, in due course, become definitive and complete. Evolutionary theories proposed that nature was for ever on a progression towards more developed and sophisticated forms, produced from the inheritance of acquired characteristics (Fig 1.4). Jean-Baptiste Lamarck (1744–1829) published *Philosophie Zoologique* in 1809 and proposed his own version of evolutionary theory.[105] Darwin's *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* (1859)[106] while refuting some parts of Lamarckian thinking added to evolutionary theory the method of 'Natural Selection'. Darwin then applied these ideas to the human race in *The Descent of Man, and Selection in Relation to Sex*, published in 1871.[107] The progress that these theories read into natural history was transposed onto the very structures of epistemology to become the idea of the perfectibility of knowledge itself: as in nature, so elsewhere. In combination, geology and

103 See Manuel DeLanda, 'The Geology of Morals: A Neomaterialist Interpretation', *Virtual Futures 95 Conference* (Warwick University, UK, 1995).

104 Charles Lyell, *Principles of Geology, Being an Attempt to Explain the Former Changes of the Earth's Surface, by Reference to Causes Now in Operation* (London: John Murray, 1833).

105 See George W. Stocking, 'Lamarckism in American Social Science: 1890–1915', *Journal of the History of Ideas,* **23** (1962), pp. 239–256.

106 Charles Darwin, *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* (London: John Murray, 1859).

107 Charles Darwin, *The Descent of Man, and Selection in Relation to Sex* (London: John Murray, 1871).

evolutionary theory opened the natural world up to interpretation in its geological, vegetable, animal and human forms. These biological theories were transposed upon questions pertaining to the humanities, such as the artefacts of human culture, so as to inform theories of sociocultural evolutionism.

According to Stocking, the earlier part of the nineteenth century was:

> still a part of the pre-promethian period when evolutionary titans, seated in their armchairs, culled ethnographic data form travel accounts to document their vision of the stages of creation of human cultural forms.[108]

This phase was supplanted by one with an increased urgency towards fieldwork. Imperial projects had opened the world to British exploitation, and with this global reach exploration and discovery were the order of the day. Evolutionary anthropologists were interested in gathering further data to support their views. With the expansion of Empire and the colonial fervour for exploration, many more encounters with different peoples of the world took place. These multiplying instances of encounters with savages, primitives and uncivilised people, strange to Victorian culture and mores, gave momentum to the development of anthropology. This interest first manifested as a gentlemen's club and in the establishment of societies: The Aborigines Protection Society was formed in 1837 and from this The Ethnological Society of London seceded in 1843. The Ethnological Society and The Anthropological Society were both running between 1863 and 1870, but in 1871 these two societies merged to form The Anthropological Institute of Great Britain and Northern Ireland. Anthropology was subsequently validated as a new discipline in 1883 when Edward Burnett Tylor gave the first lectures in anthropology at Oxford University.

These societies discussed the origins of man: was the human pre-eminent or a primate, was the human family derived from monogeny or polygeny, that is sharing in one common ancestry, or descended from multiple ancestral sources.[109] Around and through these debates circulated questions of man's place in nature: such as what constituted the human as distinct from the

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108 George W. Stocking, *The Ethnographer's Magic and Other Essays in the History of Anthropology* (Wisconsin, London: University of Wisconsin Press, 1992), p. 17.

109 Stocking, 'Ethnology on the Eve of Evolution', in *Victorian Anthropology,* p. 67.

animal, and how different humans might be from each other. Darwin's concluding notes in the travel narrative of the *Voyage of the Beagle* read:

> Of individual objects, perhaps nothing is more certain to create astonishment than the first sight in his native haunt of a barbarian – of man in his lowest and most savage state. One's mind hurries back over past centuries, and then asks, could our progenitors have been men like these?[110]

Like the layers of prehistoric rock exposed to the surface for a geologizing gaze, these primitive people seemed to present to the Victorian observer a living record of prehistoric man. In other words, the encounters with 'savages' gave civilised man the opportunity to come face to face with his own past.

With the comprehension that studying these primitive peoples might be akin to a kind of geological dig into the past of human culture, came the concurrent rising anxiety that this great source of data was rapidly dwindling.

> The material for this study is vanishing so fast with the spread of civilization that opportunities lost now will never be regained, and already even it is practically impossible to find native tribes which are wholly uncontaminated with products, good or bad, of higher cultures.[111]

The concern was that those uncivilised people were becoming tainted by civilisation and so would no longer be representative of an authentic version of their culture, or that they were just being killed out, by various means, more or less direct, more or less criminally liable. Death was brought through war or overt and government supported plans for genocide, or through diseases to which the populations had no resistance. With a cruel and faulty logic, cases of extinction were taken as a proof of the backwardness of the culture. Natural selection was the motor, in Darwin's words: 'old forms will be supplanted by new and improved forms',[112] ever since the primordial sea.[113] With a concern for the gaps that these extinctions would rent in the fabric of anticipated total knowledge, Victorian anthropologists took on the task of coordinating and standardising the collecting of data before it was too late.[114]

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110 Darwin, *Journal of Researches,* p. 605.

111 Henry Balfour, introduction, Lane Fox Pitt-Rivers, *The Evolution of Culture and Other Essays* ed. by J.L. Myers, with an introduction by Henry Balfour (Oxford: Clarendon Press, 1906), p. xvii.

112 Charles Darwin, *On the Origin of Species*, p. 475.

113 Stocking, *Victorian Anthropology*, pp. 274–83.

114 Henry Balfour, in Lane Fox Pitt-Rivers, *The Evolution of Culture and Other Essays,* p. xvii.

Fig 1.5

Whilst in Salisbury staying with his uncle in early 1887, the young Wilson, aged fourteen, made a visit to the local Blackmore Museum, where according to his letters home he found much of interest, 'especially in its unique anthropological collection'.[115] The young Wilson, who, 'even when quite a boy had a singular gift for accurate and patient observation',[116] may have used this skill to make drawings of what he saw there. William Blackmore (1827–1878) had opened the museum[117] in 1867 to house archaeological finds from the 'pipe' mounds of Ohio.[118] Blackmore wrote: 'one great lesson which I conceive to be taught by my collection is Progress'[119] (Fig 1.5). The Blackmore Museum collection may have been novel to the young Wilson, but it had this idea of 'Progress' in common with the thoughts of another collector and creator of ethnographic museums of the time: General Lane Fox Pitt-Rivers.

In 1889–1890, a few years after Wilson's first visit, Pitt-Rivers, then Colonel Lane Fox,[120] delivered the paper 'On the Uses and Arrangements of Arts Museums' at the Blackmore Museum.[121] This lecture was a precursor to similar lectures such as the subsequent lecture he gave in London at The Society of the Arts noted in *The Proceedings of the Society Fifth Ordinary Meeting* December

115 Seaver, *Edward Wilson Nature-Lover,* p. 7.

116 The Rev. Maurice Tanner, *The Cheltonian,* March 1913, cited in Seaver, *Edward Wilson of the Antarctic*, p. 8.

117 *Guide to the Blackmore Museum*, (1885).

118 'The Salisbury Museum', <http://www.salisburymuseum.org.uk/about-us/museum-history> [30 July 2014].

119 R.W.H Willoughby, 'The (William) Blackmore Museum', *The Wiltshire Archaeological and Natural History Magazine,* **57** (1960), pp. 316–321, p.320.

120 General Lane Fox Pitt-Rivers was known as Lane Fox up until his inheritance, when he took the name Pitt-Rivers. I shall be referring to him as Pitt-Rivers in the text from here on. His publications will be named according to his name at the time of their publication.

121 Salisbury and South Wiltshire Museum (SSWM), Pitt-Rivers Papers, P142d, Pitt-Rivers, 'On the Uses and Arrangement of Arts Museums 1889–1890', Lecture given at Blackmore Museum, Salisbury, *Rethinking Pitt Rivers* <http://web.prm.ox.ac.uk/rpr/index.php/article-index/12-articles/682-uses-and-arrangements-of-museums/index.html> [30 July 2014], para.38. Hereafter 'On the Uses and Arrangement of Arts Museums 1889–1890'. According to *Rethinking Pitt Rivers* website above: 'Adrian Green, Director of the Salisbury and South Wiltshire Museum (the successor museum to the Blackmore) has ascertained that the annual report for 1889–90 for the Museum confirms that Pitt-Rivers gave this lecture in that year'. Para. 1.

16, 1891, titled 'Typological Museums, as exemplified by the Pitt-Rivers Museum at Oxford, and his provincial museum at Farnham, Dorset'.[122] In his introduction to the talk he made it clear that he rated the Blackmore Museum as one of the best local museums in the country and that those visitors familiar with its arrangement would have thereby been made 'tolerably familiar' with the ideas that Pitt-Rivers was keen to expound.

Pitt-Rivers claimed to have invented the term 'typology' to describe the arrangement of anthropological artefacts, according to their features and functions rather than according to the geographical region associated with the material culture of a particular society.

> It appears to me that a name is wanted for this branch of investigation, which the term 'Typology' supplies.[123]

Pitt-Rivers wrote that items should 'display sequence' by being 'arranged so as to show how one form had led to another'. The framework of understanding was evolutionary; the idea was that some races were further along the scale of development than others.[124] Pitt-Rivers saw in natural history the lesson of gradual development and progress. Where chronology was not known, as in the case of many prehistoric items, typology should, according to Pitt-Rivers, take over. This, Pitt-Rivers said, worked against 'scatter-brained revolutionary suggestions',[125] by showing that according to the arrangement of material culture, 'the law that Nature makes no jumps'.[126] Pitt-Rivers used the metaphor of a ladder to provide a clear image of ascent and progress in the development of the arts and to caution against revolutionary thoughts that might 'heedlessly kick [this ladder] away'.[127] Pitt-Rivers suggested that: 'Knowledge upon this progressive aspect of the world's history can be most accurately and quickly supplied by means of Museums'.[128] The lecture 'On the Uses and Arrangements

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122 Pitt-Rivers, 'Typological Museums, as Exemplified by the Pitt-Rivers Museum at Oxford and His Provincial Museum at Farnham, Dorset', *Journal of the Society of the Arts,* **XL**, 2039 (1891), pp. 115–22. Hereafter 'Typological Museums'.

123 Pitt-Rivers, 'Typological Museums', p. 116.

124 Pitt-Rivers, 'Typological Museums', p. 116.

125 Pitt-Rivers, 'Typological Museums', p. 116.

126 Pitt-Rivers, 'Typological Museums', p. 116.

127 Lane Fox, 'On the Uses and Arrangement of Arts Museums 1889–1890', para. 2.

128 Lane Fox, 'On the Uses and Arrangement of Arts Museums 1889–1890', para. 2.

of Museums of Arts' began by stressing that the museum's purpose was educational and he lamented that increased literacy, cheap paper, and sentiment were 'greatly facilitat[ing] the capacity for acquiring false notions on abstruse topics'[129] in the masses.

Pitt-Rivers was the secretary of the Committee set up by The British Association for the Advancement of Science in 1872 for the purpose of 'preparing and publishing brief forms of instruction for travellers, ethnologists, and other anthropological observers'.[130] Also on the committee were Francis Galton, the pioneer of eugenics; Edward Burnett Tylor, the first person to hold a professorship in anthropology at University of Oxford, and writer of *Primitive Culture* 1871;[131] and the Editor of the Royal Geographical Society *Hints for Travellers*[132] Clements R. Markham, current Secretary and later President of the Royal Geographical Society, supporter of Scott, and organiser of the 1901–1904 *Discovery* expedition to Antarctica. Contributions on *'Physiognomy'* were made by Charles Darwin.[133] The first publication of what was to be known as *Notes and Queries on Anthropology for Travellers and Residents in Uncivilized Lands* (later to be shortened to *Notes and Queries on Anthropology*) was intended to promote a more organised approach to the making of observations of an ethnographic nature.[134] Pitt-Rivers was a major contributor to both the first and second edition, and he was the author of the preface of both. He stated there that 'the anthropologist regards all races as equally worthy of a place in the records of human development',[135] but this worthiness seemed still to be within a strict developmental and evolutionary hierarchy. In his preface to the first edition Pitt-Rivers wrote,

> The object of the work is to promote accurate anthropological observation on the part of travellers, and to enable those who are not anthropologists themselves to supply the information which is wanted for the scientific study

129 Lane Fox, 'On the Uses and Arrangement of Arts Museums 1889–1890', para. 2.

130 Lane Fox 'Preface', in *Notes and Queries,* 1st edn, pp. i–v, p. iv.

131 Burnett Tylor, *Primitive Culture,* (London: Murray, 1871).

132 See section 'Hints to Travellers' in this chapter.

133 Darwin, 'No IX. On Pysiognomy', *Notes and Queries* 1st edn, p. 12.

134 Lane Fox, 'Preface', *Notes and Queries,* 1st edn, p. iv.

135 Lane Fox, 'Preface', *Notes and Queries,* 1st edn, p. iv.

of anthropology at home.[136]

Notes and Queries on Anthropology for Travellers and Residents in Uncivilized Lands may have been intended for just such a travelling collector as Henry Blackmore, the aim having been to standardise the methods by which a collection such as his should be gathered.

Notes and Queries lamented the lack of objective observation in the field and asserted the proper methods for gaining further data. Pitt-Rivers noted that the failings in the quality of prior observations had been mostly to do with the observers' own prejudices, providing many instances when:

> the information thus obtained has been lamentably distorted in order to render it in harmony with preconceived ideas.[137]

What is more, he continued, the possibility for correct data acquisition was under threat as the persons of interest were heading fast towards extinction:

> The rapid extermination of savages at the present time, and the rapidity with which they are being reduced to the standard of European manners, renders it of urgent importance to correct these sources of error as soon as possible.[138]

Pitt-Rivers made contributions on an eclectic range of subjects based upon some of the areas in which he felt most expert. Each section was set out with a brief introduction followed by the set of numbered queries or leading questions that should guide the traveller's observations, sometimes with a number cross-referencing the reader to further relevant sections of the book. He wrote, in the order in which they occur, a section on: Archaeology, War, Hunting, Games and Amusements, Circumcision, Drawing, Ornamentation, Stone implements, and Natural Forms.

In this first edition of *Notes and Queries*, 'Drawing' was to be observed as a native behaviour and/or collected as an artefact from which to extract anthropological data. Under his brief introduction, Pitt Rivers made some remarks on the broad comparisons between different races:

> Great difference is observable in the capacity for drawing shown by different races. Thus the Esquimaux are comparatively skilful draughtsman, whilst the Australians, as a rule, have but little or no knowledge of it. Amongst the relics found in the caves of Périgord, in France, life-like representations of animals

136 Lane Fox, 'Preface', *Notes and Queries,* 1st edn, p. iv.

137 Lane Fox, 'Preface', *Notes and Queries*, 1st edn, p. iv.

138 Lane Fox, 'Preface', *Notes and Queries,* 1st edn, p. v.

> have been discovered, whilst the rock engravings of South America represent figures so grotesque as scarcely to be recognized.[139]

He requested that care be taken to distinguish between representative drawing, 'the best attempt of natives to depict the objects truthfully', and that which might better described as writing or ornamentation 'assigning to each its true signification', while understanding that all drawing sprang 'from a common centre'.[140] This followed the same formation of root, trunk and branch that he used to visualise his evolutionary typology of human cultural development.

The queries continued with regard to a concern with perspective and whether this was sacrificed in favour of what is properly important in a drawing, that is, does the status of the objects determine the size rather than the perspectival distance according to the viewer's supposed position, meaning that smaller things would appear further away?

> 1.Have the natives a natural aptitude for drawing? 2. Do they draw animals in preference to other subjects? 3. Are the most conspicuous features, such as the head, nose, generally exaggerated? 4. Have they the least knowledge of perspective? 5. Are the more distant objects drawn smaller than those nearer? 6. Are the more important personages or objects drawn larger than the others?[141]

In addition, the queries showed an interest in spatial coherence. The book asked: is there 'any conception of scale?' It also asked about the coherence of temporal references: 'are events of different periods depicted in the same drawing?' The queries asked that distinctions be made between copies from nature and imaginative designs. Were the drawings topographical or were they without any definite meaning being 'scribbles to occupy idle time'? As regards the social practice of drawing, 'Do they improve with practice?'[142] The questions regarding the drawing capabilities of the natives under observation in *Note and Queries* take drawing as a form of ethnographic data, not drawing as a useful practice to include amongst the observer's tools. 'Do they draw maps or plans? 22. Do they understand European maps? 23. Have they any notion of drawing

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139 Lane Fox, 'Drawing', *Notes and Queries,* 1st edn, p. 118.

140 Lane Fox, 'Drawing', *Notes and Queries,* 1st edn, p. 118.

141 Lane Fox, 'Drawing', *Notes and Queries*, 1st edn, p. 118.

142 Lane Fox, 'Drawing', *Notes and Queries,* 1st edn, p. 118.

to scale?'[143] and '14. Do they readily understand European drawings? 15. Do they show any aptitude in copying European designs?'[144]

143 Lane Fox, 'Drawing', *Notes and Queries,* 1st edn, p. 118.

144 Lane Fox, 'Drawing', *Notes and Queries,* 1st edn, p. 120.

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Fig 1.7

Suiseki Bergs 2013 *Penguin Pool* 2015

There were representatives from two other nations on the continent of Antarctica at the same time as Scott and Amundsen: A German *Deutschland* expedition led by Wilhelm Filchner (1877–1957), and a Japanese Antarctic Expedition in *Kainan Maru* led by Nobu Shirase (1861–1946). Shirase made it to 80° south in 1912 but is often ignored in histories of Antarctic exploration. In the 1957 book *Quest for a Continent: The Story of Antarctic Exploration by One Who Has Himself Experienced Its Rigours*, a map of expeditions does not even detail the significant achievement of the Japanese, but only mentions in the text their failure to join the race:

> A little-publicized third expedition was in the race, under Lieutenant Shirase of the Imperial Japanese Navy, but he was unable to pierce the pack that season and thus dropped out of the running.[145]

As Shirase was not the one who came first or travelled the farthest his expedition was not met with much publicity in his home nation. He was also overlooked by those European narratives that were more interested in European stories.

Suiseki Bergs 2013 is modelled on observational drawings of ice formations that Wilson drew in his sketchbooks. These were either little drawings or finished watercolours (Fig 1.6). From these drawings made by Wilson I need to choose two-dimensional views that will be workable in a three-dimensional mould. I make my own typology: the cheese wedge, the conical, the cuboid (Fig 1.7).

My aim is to imitate the mechanically-produced pressed-glass of decorative desert bowls of late Victorian/early Edwardian times, but these pressed 'glass bergs' that I am working on are hand-made and unique. Pressed glass had its peak during the 1880s and continued in popularity into the early 1900s, making previously expensive glass widely available for middle-class families.[146] Since I am keen that the piece looks at home in a 1900s living room, I look

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145 Walter Sullivan, *Quest for a Continent: The Story of Antarctic Exploration by One Who Has Himself Experienced Its Rigours* (London: Secker & Warburg, 1957), p. 52.

146 Rod Crowshaw, 'The Rise & Fall of English Pressed Glass', *The National Glass Fair*, 2009, <http://www.glassfairs.co.uk/Articles/rise-fall.html>, [31 July 2014].

for Edwardian occasional tables: mahogany was popular at the time, as was Japanese black lacquer, part of the Edwardian craze for *Japonisme*.[147] The pieces of hand-blown moulded glass, in the form of icebergs, are placed on Edwardian mahogany tables. The name *Suiseki Bergs* is a reference to the Japanese appreciation of small rocks taken to stand for mountains. These rocks were found not made, but they were chosen for their particular capacity to suggest the grand scale of the landscape in a miniature form. *Suiseki* were meant to enable contemplation. The huge iceberg is reformed in a glass version in domesticated ornamental dimensions (Figs 1.8 & 1.9).

147 Victoria and Albert Museum, 'The Victorian vision of China and Japan' <www.vam.ac.uk/content/articles/t/the-victorian-vision-of-china-and -japan/> [3 August 2015] para. 12/18.

Fig 1.8

Fig 1.9

Hints to Travellers *Lantern Lecture* 2013

Notes and Queries was modelled upon and had many contributors in common with *Hints to Travellers*,[148] a publication produced by the Royal Geographical Society. This institution was established in 1830, as Driver writes in 'The RGS and the Empire of Science', to 'co-ordinate the collection, storage and dissemination of geographical knowledge in a rational manner',[149] which, according to Driver, came about out of a concern for establishing the legitimacy of geographical knowledge at a time when much information had been gathered in a haphazard manner by missionaries, explorers and conquistadors.[150]

Careful observation was a requisite of geographical exploration too, and it had in common with anthropology the disappearing objects of these acts of observation; in anthropology this was the loss of primitive peoples, and in geography the reduction in unknown territory. This sentiment can be read in the following passage from the 1878 edition of the Royal Geographical Society's *Hints to Travellers*:

> The extent of the regions of terra incognita in which inexperienced travellers can operate with the greatest advantages is constantly becoming more and more narrowed and diminished, and geographical science now-a-days frequently requires that the rough outlines which have hitherto sufficed for her purposes should not only be amplified and filled in, but rectified by more exact and reliable observations.[151]

As indicated in the above quote, as the new territory to discover was diminishing, the goal was revised to retrace with more accurate observation that territory which had already been discovered.

The manual was produced as a means by which to respond to 'applications […] frequently made by travellers to the Royal Geographical Society, for instruction by which they may make their labours useful to Geography'.[152]

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148 *Hints to Travellers*, ed. by Francis Galton, 4th edn (London: The Royal Geographical Society, 1878). Francis Galton edited the Third and Fourth editions of *Notes and Queries.*

149 Driver, *Geography Militant: Cultures of Exploration and Empire*, p. 28.

150 Driver, *Geography Militant: Cultures of Exploration and Empire*, p. 29.

151 Colonel J.T. Walker, Superintendent of the Great Trigonometrical Survey of India 'On Observations with Theodolites or Altazimuth Instruments', *Hints to Travellers*, 4th edn, p. 29.

152 Preface, *Hints to Travellers,* 3rd edn [and reprinted in the 4th edn], p. 1.

The advice supplied therein, the reader was assured, would be suitable for enabling a traveller to any part of the globe to achieve as good results as any previous explorers.

> The following remarks are to be understood as addressed to a person who for the first time in his life, proposes to explore a wild country, and who asks, 'What astronomical and mapping instruments, and other scientific outfit ought I to take with me? And what are the observations for latitude and longitude, on which I should chiefly rely?'[153]

Within the pages of *Hints to Travellers* the two primary concerns were the standardisation of the form for recording observations, and the reliability of the scientific equipment.[154] In pursuit of accuracy and of developing these standards, it was advised that before departure instruments should be calibrated at Greenwich Observatory.[155] Travel had played its part, too, in this recent 1884 standardisation of time with Greenwich as the zero meridian:[156] the institution of a standard of time came about in part with the invention of the speedy locomotive. This mode of travel covered geographical space at greatly increased rates, and the consequent demands for coordinated timetabling had shown the world to be made up of increasingly impractical time zones.[157]

In order to support the production of accurate information on location, *Hints to Travellers* also included instruction upon 'Surveys, with sextants and Prismatic Compass'.[158] The rudimentary mapping skills that the *Hints to Travellers* supplied was best applied to the entirely unmapped territories in which even basic information would prove elucidating. The author advised that small territories could be treated as flat, but large ones would need to take into account the curvature of the earth, and their mapping would therefore entail some projection of the sphere.[159] The author continued to explain that the Mercator's Projection was proportionally true between the meridians but

153 *Hints to Travellers*, 3rd edn, p. 2.

154 Driver, *Geography Militant: Cultures of Exploration and Empire*, pp. 57–58.

155 *Hints to Travellers,* 3rd edn, p. 3.

156 Doreen Massey, *For Space* (London: Sage, 2005), p. 12.

157 Kern, *The Culture of Time and Space 1880–1918*, p. 2.

158 Major C.W. Wilson, 'Surveys, with sextants and Prismatic Compass', in *Hints to Travellers*, 3rd edn, pp. 53–69.

159 Major C.W. Wilson, *Hints to Travellers*, 3rd edn, p. 53.

advised that 'if the map is extended much above or below the middle's latitude, the distant parts will be greatly distorted': beyond 50° or 60° a 'polar projection is preferable'.[160]

Hints to Travellers contained a large section on the collection of objects of 'natural history'. The advice was to seek indigenous specimens 'in the remote parts where they are more likely to have escaped extermination by settlers and the domestic animals introduced by them'.[161] At the top of the list of required items that accompanied this advice were guns,[162] the inclusion of which would have undoubtedly contributed to the further extinctions of those indigenous specimens. And a discussion of methods for collecting was followed by this statement:

> This leads us to one point which cannot be too strongly insisted on, namely, that some means should be adopted by the traveller to record the exact location of the specimens he collects.[163]

Anthropologist-geographers should note the field coordinates of the items collected. Photographic documentation should be treated with similar precision:

> The record of views taken ought to note, beside the date and subject, the hour, the length of exposure, and the state of weather.[164]

From the archives and examining his annotation of sketches with date, latitude and longitude it was clear that Wilson took up this kind of practice (Fig 1.10).

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160 Major C.W. Wilson, *Hints to Travellers*, 3rd edn, pp. 53–54. The Mercator projection is best used for areas around the equator. It produces great distortions in the Polar regions. The Polar projection is centred on the Pole with all distances from the pole being accurate.

161 H. W. Bates, 'Hints to Travellers on the Collection of Objects of Natural History', *Hints to Travellers*, 3rd edn, pp. 73–74.

162 H. W. Bates, 3rd edn, *Hints to Travellers*, p. 73.

163 H. W. Bates, 3rd edn, *Hints to Travellers*, p. 74.

164 Rev. H. B. George, 'Photography', *Hints to Travellers,* 3rd edn, pp. 47–53, p. 51

Fig 1.10

Avant-garde *Rear-Guard*

> It falls to the lot of few men to view land not previously seen by human eyes, and it was with feelings of keen curiosity, not unmingled with awe, that we watched the new mountains rise from the great unknown that lay ahead of us.[165]

I argue that the exploration of new territory, such as those in which Wilson participated, and practices of avant-garde art, have a temporal logic similar to the historical progress implied in social evolutionism and expressed in the typological arrangements put forward by Pitt-Rivers. As with the discourse around heroic exploration, the avant-garde in art speaks of a move elsewhere beyond the already known: avant-garde artists are the advance group, the pioneers.

Artistic modernism seems to share both the narratives of exploration and an aesthetic similar to the landscape of Antarctica: why, then, does artistic modernism not latch on to Antarctica as a landscape that is a suitable metaphor for its own concerns? Antarctica is aesthetically picturesque at the periphery but its interior is a vast, mostly featureless plateau. Journeying into the interior, one loses familiar subjects of artistic contemplation; colour is obliterated in blackout or white-out, shapes are obscured, distance is hard to determine. Stephen Pyne characterises the connection between the landscape and artistic modernism as follows:

> Mathematical perspective becomes impossible, the customary icons of landscape art cannot be found, colour and shape are bleached from the scene, and inherited artistic conventions become meaningless. Instead the landscape is abstract, minimal, conceptual. Interior Antarctica is nature as modernist.[166]

Yet, according to Pyne, modernism turns away from the outside world to the interior of its own limits and prescriptions: it does not need an empirical observed reality upon which to found itself; it is concerned with a self-reflexive attention to its own medium.[167] In this characterisation I suggest that Pyne is drawing upon the definition of modernism as put forward by art critic

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165 Ernest Shackleton, 26 November 1908, cited in Courtauld, ed., *From the Ends of the Earth*, p. 315.

166 Stephen J. Pyne, *The Ice* (London: Weidenfeld & Nicolson, 2003), p. 152.

167 Pyne, *The Ice*, p. 152.

Clement Greenberg (1909–1994) as it particularly concerns twentieth-century American avant-garde abstract art.

In his essay 'Towards a Newer Laocoon'[168] Greenberg builds upon Irving Babbitt's *The New Laokoön: An Essay on the Confusion of the Arts*, of 1910, which in its turn referred to the influential essay by eighteenth-century art historian Gotthold Lessing: *Laokoön: oder über die Grenzen der Malerei und Poesie* (1766) 'Laocoon: or on the Borders (Limits) of Painting and Poetry'. Lessing's essay argues that painting and poetry are subject to different rules: painting he associates with space and poetry with time, yet he doesn't just compare these two creative practices, he creates a hierarchy in which he places temporal narrative literature above the plastic spatial arts.[169]

In contrast, while also advocating for boundaries between the arts, Greenberg reverses the hierarchy: he argues for the supremacy of painting as the dominant form, specifically in its manifestation as American abstract expressionism, which he argues is the avant-garde culmination of history.

Greenberg acknowledges that at different historical times different arts have been prized above others, and, as a consequence those less-valued arts have tried to imitate those more favoured arts:

> Now, when it happens that the single art is given the dominant role, it becomes the prototype of all art: the others try to shed their proper characters and imitate its effects. The dominant art in turn tries to absorb the function of the others. A confusion of the arts results.[170]

This, Greenberg says, was the case with painting, which, according to Lessing and Greenberg the '17th and 18th century strained most of all'.[171] Greenberg explains that in this period painting was in the shadow of literature and sought therefore to imitate literature. Greenberg then traces the departure of art from this state of affairs through to the Impressionists, who saw painting as 'first and foremost a problem of the medium',[172] then to avant-garde practices, up to and

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168 Clement Greenberg, 'Towards a Newer Laocoon', *Art in Theory 1900–2000: An Anthology of Changing Ideas,* ed. by Charles Harrison and Paul Wood (Oxford: Blackwell, 2004), pp. 562–568. Originally published in *Partisan Review*, New York, **VII**, 4, August 1940, pp. 296–310.

169 Gotthold Lessing: *Laokoön: oder über die Grenzen der Malerei und Poesie* (1766).

170 Greenberg, '*Towards a Newer Laocoon*', p. 563.

171 Greenberg, '*Towards a Newer Laocoon*', p. 563.

172 Greenberg, '*Towards a Newer Laocoon*', p. 565.

culminating in colour field abstraction:

> the avant-garde arts have in the last fifty years achieved a purity and a radical delimitation of their fields of activity for which there is no previous example in the history of culture.[173]

With the following vivid metaphoric language, reminiscent of the collecting of indigenous natural history specimens in *Hints to Travellers,*[174] Greenberg introduces the image of the arts as animal-bodies pushed back to their proper territorial place as defined by medium.

> The arts, then, have been hunted back to their mediums, and there they have been isolated, concentrated and defined.[175]

In an equally combative turn of phrase, suited to the origin of the term avant-garde in military vocabulary and the 'Geography Militant' of Driver's accounts, Greenberg describes the battle-ground of art history as follows:

> The history of avant-garde painting is that of a progressive surrender to the resistance of its medium; which resistance consists chiefly in the flat picture plane's denial of efforts to 'hole through' it for realistic perspectival space.[176]

By surrendering so, Greenberg says, painting had 'got rid of imitation – and with it, "literature"'.[177]

Greenberg's modernism demonstrates a progressive evolutionism.[178] According to Charles Harrison and Paul Wood, 'His aim was at one and the same time to establish the quality of certain abstract art and to show abstraction as the fulfilment of an inexorable historical tendency'.[179] Greenberg ends his essay by saying:

> I find that I have offered no other explanation for the present superiority of abstract art than its historical justification.[180]

The problem with Greenberg's form of explanation is that it performs a tautology with the aid of a teleological thinking: Greenberg's version of history

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173 Greenberg, '*Towards a Newer Laocoon*', p. 566.

174 H. W. Bates, 'Hints to Travellers on the Collection of Objects of Natural History', *Hints to Travellers*, 3rd edn, pp.73–74.

175 Greenberg, '*Towards a Newer Laocoon*', p. 566.

176 Greenberg, '*Towards a Newer Laocoon*', p. 566.

177 Greenberg, '*Towards a Newer Laocoon*', p. 566.

178 Greenberg, '*Towards a Newer Laocoon*', pp. 562–568.

179 Charles Harrison and Paul Wood, *Art in Theory 1900–2000: An Anthology of Changing Ideas,* p. 562.

180 Greenberg, '*Towards a Newer Laocoon*', p. 567.

places avant-garde abstraction as best because it comes last, but it is also last because it is best. If we approach history with a refractive method then it creates a horizontal levelling in which one can take account of differences between art practices without ordering them into the predetermined alignment that ignores what does not fit. At this point it must be recalled that there are other avant-garde histories, such as that of collage, that are not about the specificity of a medium, but about the differences between mediums. Also British modernism, for example, was a different modernism, where medium specificity was not paramount.[181]

According to Greenberg, avant-garde modernism's validity is sought in the medium.[182]

> In turning his attention away from subject matter or common experience, the poet or artist turns it in upon the medium of his own craft. The nonrepresentational or 'abstract', if it is to have aesthetic validity, cannot be arbitrary and accidental, but must stem from obedience to some worthy constraint or original. This constraint, once the world of common, extroverted experience has been renounced, can only be found in the very processes or disciplines by which art and literature have already imitated the former. These themselves become the subject matter of art and literature.[183]

Greenberg says that instead of imitating past art, the avant-garde artists imitate the medium of their art. Greenberg writes that the opacity of the medium as that which makes the work incapable of translation or *ekphrasis* into any other form. Greenberg writes that in avant-garde art:

> Content is to be dissolved so completely into form that the work of art or literature cannot be reduced in whole or part to anything not itself.[184]

With avant-garde modernism there is the paradoxical fixation with the identification with medium as what defines an area of practice such as painting. Medium becomes the datum, a fixed value by which to define the artwork. Avant-garde truth to medium is also a stabilised notion of medium. Modernism in art turns away from the subject matter and narrative that might seem to link and locate the work to some external referent, towards the

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181 *The Edwardian Sense: Art, Design, and Performance in Britain, 1901–1910,* ed. by Morna O'Neill and Michael Hatt (New Haven, CT: Yale University Press, 2010).

182 Clement Greenberg, 'Avant-Garde and Kitsch', *Partisan Review,* **VI**, 5 (1939), pp. 34–49.

183 Greenberg, 'Avant-Garde and Kitsch', pp. 36–37.

184 Greenberg, 'Avant-Garde and Kitsch', p. 36.

medium and its specificity.

> The avant-garde poet or artist tries in effect to imitate God by creating something valid solely on its own terms in the way that nature itself is valid, in the way a landscape – not its picture – is aesthetically valid; something given, increate, independent of meanings, similars or originals.[185]

Here in this thesis, I engage with medium not in terms of permanent features that set up boundaries to be maintained between, say painting and literature, or painting and sculpture, but in terms of *ekphrasis*, a process of enacting the passage between boundaries, between one medium and another. This is the refractive methodology. This attention to medium here is not one that tries to underscore their separation as distinct specificities to provide fixity in definitions, but seeks to explore the relation between media, the differences between them, and the refractive shifts that occur in crossing the boundaries between them. This ekphrastic process does not, then, support the avant-garde medium specificity of Greenberg, which I argue underscores a kind of essentialism and immutability and that intends to keep arts defined by their medium and separate from each other. Rather, in this thesis the focus of my attention is the ekphrastic transposition across media and between arts, transposition across boundaries. My method operates in the making of art works through the archive, and in the relation between the writing and the artwork in the argument of the thesis, as well as between the written sections and the image sections on the printed pages.

185 Greenberg, 'Avant-Garde and Kitsch', p. 36.

Fig 1.11

The View from Nowhere *A View from Somewhere*

Steven Shapin, the historian and sociologist of science, writes that 'both common and philosophical usages testify to the very nature of authentically scientific ideas as disembodied and their scope as universal'.[186] Scientific truth, Shapin argues, is defined by its applicability across space and time, and that it is not a localised truth. As regards science, Shapin says that 'the view from nowhere' is still a strongly functioning epistemological attitude that proposes non-position as the no-place where scientific truth is produced (Fig 1.11).[187]

Shapin argues that 'the "localist" or "geographical" turn in science' showed:

> that science is indelibly marked by the local and the spatial circumstances of its making; that scientific knowledge is embodied, residing in people and in such material objects as books and instruments, and nowhere else; and, finally, that scientific knowledge is made by and through mundane – and locally varying – modes of social and cultural interaction.[188]

Shapin says we need to know how 'knowledge is made in specific places but also how transactions occur between places'.[189] Shapin calls this a problem of *travel* regarding science: 'If science is indeed a local product, how does it – or rather some version of it – get to travel with what seems to be unique efficiency?'[190]

> When knowledge of the world can be reduced to the scale of the table top and when mechanically produced and virtually identical copies can be placed on table-tops everywhere, then all can potentially and in principle know the same world in the same ways.[191]

Referring to the work of Bruno Latour,[192] Shapin explains that scientific practices' ability to travel is determined by the extent of their

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186 Steven Shapin, 'Placing the View from Nowhere: Historical and Sociological Problems with the Location of Science', *Transactions of the Institute of British Geographers,* **23**, 1 (1998), pp. 5–12 <http://www.jstor.org/stable/623153. > [18 September 2014], p. 5.

187 See Steven Shapin, *Never Pure: Historical Studies of Science as if it Was Produced by People with Bodies, Situated in Time, Space, Culture, and Society, and Struggling for Credibility and Authority* (Baltimore: Johns Hopkins University Press, 2010).

188 Shapin, 'Placing the View from Nowhere', p. 6.

189 Shapin, 'Placing the View from Nowhere', pp. 6–7.

190 Shapin, 'Placing the View from Nowhere', p. 7.

191 Shapin, 'Placing the View from Nowhere', p. 7.

192 Bruno Latour, *Science in Action: How to Follow Scientists and Engineers through Society* (Cambridge, M.A: Harvard University Press, 1988).

institutionalisation and standardisation, citing the graph, map, book, and thermometer as 'vehicles' that are successful in travelling, and supporting the 'efficient translation of relatively unmodified knowledge'.[193] It is the manner in which this knowledge can be transported, 'mechanically reproduced', and copied, thus providing identical representations that are also methodologically the same, across different places and times, that makes the associated knowledge 'durable' and 'incontestable'.[194]

> How does a proposition or procedure produced in one place come to spread across the world? One appeal of the grand modernist narratives of reason, reality and method was the table-thumping response they offered to potential questions about the travel of science. Such knowledge spreads so robustly across the world because it is true and/or because it travels along the channels carved out by unambiguous and automatic transferable methodical practices. Knowledge which is not true, or which is not so methodically grounded, does not spread. What more do you need to know? [195]

Shapin says that these modernist arguments can be rejected as an explanation of the success of scientific ideas in travelling.[196] Geographical thinking in science studies has exposed tensions between 'transcendentalist conceptions of truth and emerging localist perspectives on the making, meaning and evaluation of scientific knowledge'.[197] The capacity for scientific knowledge to spread, Shapin asserts, should not to be taken as proof of its truth, but as reason for extra exertion in the theorising of the geography of knowledge.[198]

193 Shapin, 'Placing the View from Nowhere', p. 7.
194 Shapin, 'Placing the View from Nowhere', p. 7.
195 Shapin, 'Placing the View from Nowhere', p. 7.
196 Shapin, 'Placing the View from Nowhere', p. 7.
197 Shapin, 'Placing the View from Nowhere', p. 5.
198 Shapin, 'Placing the View from Nowhere', pp. 5–6.

Fig 1.12

The Archive and the Field *The Hut and the Museum*

Driver remarks that in the nineteenth-century history of geographical exploration, 'the relation between observations in the field and reflection in the study was particularly fraught with difficulty'.[199] He compares this to the armchair anthropologist and the anthropological fieldworker (Figs 1.12 & 1.13). The term Armchair Geographer was prevalent in late eighteenth and early nineteenth centuries in geography circles. It referred to those geographers who did not depend upon their own field observations but worked from their armchair in the library or archive collating the observations of others.[200] Dorinda Outram also comments on the relation between observation in the field and what can be observed from within the walls of the library. Outram, through reading the writing of eighteenth and early nineteenth-century naturalist Georges Cuvier (1769–1832), argues that sometimes observation in the study bettered observation in the field:

> In asserting that the only real voyages of exploration into nature take place in the sedentary naturalist's study, Cuvier is thus making a claim that mastery over and comprehension of nature come not from *passage* over terrain, but from the steady and immobile *gaze* of the sedentary naturalist.[201]

Outram further interprets Cuvier's attitude as follows: 'True observation of nature depends on not being there, on being anywhere which is an elsewhere'.[202] Yet the naturalist in the study depended upon the fieldwork of others to provide the materials and data from which to draw conclusions. In contrast to the overview that library study potentially supported, the field offered a sensual and sometimes overwhelming proximity. The distanced overview associated with observation was, then, better supplied by retreat

199 Driver, *Geography Militant: Cultures of Exploration and Empire*, p. 12.

200 See Driver, *Geography Militant: Cultures of Exploration and Empire*. See also Ralph Kingston, 'Armchair Expeditionaries: Voyages into the French Musée De La Marine, 1828–78', in *Expedition into Empire: Exploratory Journeys and the Making of the Modern World,* ed. by Martin Thomas (Oxford, New York: Routledge, 2015). See also Stocking, *Victorian Anthropology,* in which he describes the comparable distinction between anthropologists. See also Chapter One 'Armchairs vs. Ethnographers', in George W. Stocking, *After Tylor: British Social Anthropology, 1888–1951* (Madison: University of Wisconsin Press, 1995).

201 Dorinda Outram, 'New Spaces in Natural History', in N. Jardine, J.A. Secord and E.C. Sprary, eds. *Cultures of Natural History* (Cambridge: Cambridge University Press, 1996), pp. 249–65.

202 Outram, 'New Spaces in Natural History', p. 262.

into the study.

For the historian of anthropology, George Stocking, his field is the archive, where he thought of conversations with 'informal contacts' and 'leading elder anthropologist' as 'work with informants' and ' the notes [he] recorded as field notes'.[203] Stocking has also compared as similar to anthropological fieldwork the experience of rummaging through a jumble of archival records in which occasional moments of revelation occur.[204] Thinking analogically, the site of the archive can be taken as a site of fieldwork. In this sense, the methodology used in a fieldwork encounter can be thought of in relation to the methodology of the archive – what some might consider its opposite. The historian may have the overview that hindsight allows, thus linking the historian's practice in the archive to the principle of observational distance. After recounting the analogies between archive and field, Stocking goes on to say: 'But the historian's archive is not the ethnographer's field'.[205]

203 Stocking, *The Ethnographer's Magic*, p. 13.

204 Stocking, *The Ethnographer's Magic*, p. 13.

205 Stocking, *The Ethnographer's Magic*, p. 13.

Fig 1.13

Analogy *Similarity-in-difference*

In evolution analogy has a particular meaning as regards similarity and difference and must be distinguished from homology. Homology refers to traits inherited from common ancestors that may have similar genetic, morphology, or anatomy but result in different functions; analogy refers to similarity due to convergent evolution in which the organisms do not share a common ancestry but arrive at a common evolutionary outcome in terms of form and function.

The formal observation of similarities, favoured by Pitt-Rivers in his typological arrangement of artefacts, employs thinking by analogy by organising artefacts according to their likeness of appearance to each other. Pitt-Rivers's definition of analogy was not the same as the one that relates specifically to convergent evolution in biology. He applied analogical thinking to human material culture to infer common ancestries and then order those artefacts in a line of progressive development. Pitt-Rivers often used analogies in his writing, too. He wrote that 'the problems of the naturalist and those of the typologist are analogous. The difficulties are the same in both'.[206] He expanded the simile:

> What the palaeontologist does for zoology, the prehistorian does for anthropology. What the study of zoology does for explaining the structure of extinct species, the study of existing savages does towards enabling us to realise the condition of primaeval man. To continue the simile further, the propagation of new ideas may be said to correspond to the propagation of species. New ideas are produced by the correlation of previously existing ideas in the same manner as new individuals in a breed are produced by the union of previously existing individuals.[207]

For Pitt-Rivers, the purpose of the classification of items through their formal similarities and resulting arrangements was intended to help determine a line of cultural progress and development. If this were properly undertaken, Pitt-Rivers believed that:

> We should then be able to realise what the term 'Evolution' really means,

206 Pitt-Rivers, 'Typological Museums', p. 116.

207 Augustus Henry Lane Fox Pitt-Rivers, 'Principles of Classification 1874', *Evolution of Culture and Other Essays,* p. 18.

> as applied to the Arts of life, and how closely analagous [sic] it is to the development of species, and varieties in Natural History.[208]

The art historian Barbara Maria Stafford in her book *Visual Analogy: Consciousness as the Art of Connecting* [209] makes an argument for what she terms the anachronistic art of analogical thinking that seeks 'proportion or similarity that exists between two or more apparently dissimilar things'.[210] Stafford describes this as 'similarity-in-difference'.[211] Stafford identifies two strands to analogous thinking: one meaning of analogy she traces back to Greek mathematics and due ratio: that being how 'By means of a disciplined inferential logic, one might establish measurable connections between incongruent phenomena through a stepped system of predication'.[212] The second strand she understands as 'grounded in the rhetoric of participation' and as 'employ[ing] the mimetic vocabulary of similarity and dissimilarity'.[213] Both these strands, Stafford proposes, are 'inherently visual'.[214] Her broad argument is that there has been too great a swing towards asserting difference at the cost of affirming the contiguities and relations that can be performed *between* differences.

Stafford asserts that 'Today […] we possess no language for talking about resemblance, only an exaggerated awareness of difference'.[215] Stafford also notes, with reference to Lessing's *Laocoön,* that art history has its own history of working against analogous thinking *between* the different arts.

> Lessing's adamant rejection of formal interart parallels in the Laocoön (1766) exerted powerful pressures to define picture-making as an art independent of architecture, sculpture, and literature. This paradigm-shifting book also established a hierarchy that set temporal genres like drama and poetry above spatialised media.[216]

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208 Lane Fox, 'On the Uses and Arrangement of Arts Museums 1889–1890', para. 21/38.

209 Barbara Maria Stafford, *Visual Analogy: Consciousness as the Art of Connecting* (Cambridge, Massachusetts, London, England: The MIT Press, 2001).

210 Stafford, *Visual Analogy: Consciousness as the Art of Connecting*, p. 8.

211 Stafford, *Visual Analogy: Consciousness as the Art of Connecting*, p. 9.

212 Stafford, *Visual Analogy: Consciousness as the Art of Connecting*, p. 2.

213 Stafford, *Visual Analogy: Consciousness as the Art of Connecting*, pp. 2–4.

214 Stafford, *Visual Analogy: Consciousness as the Art of Connecting*, p. 3.

215 Stafford, *Visual Analogy: Consciousness as the Art of Connecting*, p. 10.

216 Stafford, *Visual Analogy: Consciousness as the Art of Connecting*, p. 55.

Nonetheless, for Stafford, art is the place in which analogous thinking is practised most persistently. Consequently 'a fine-grained art historical terminology' can help with 'recognizing degrees of likeness', from 'simulacrum and facsimile' to 'subtle gradations of mimesis' such as 'imitations', 'recreation', 'likeness'.[217] Stafford asserts that:

> Without a sophisticated theory of analogy, there is only the negative dialectics of difference, ending in the unbreachable impasse of pretended assimilation or the self-enclosed insistence on absolute identity with no possibility for meaningful communication. Analogizing has the virtue of making distant peoples, other periods, and even diverse contemporary contexts part of our world.[218]

Although Stafford may justly argue for analogy as a method that seeks similarity-in-difference, analogy can, nonetheless, be applied as a method, the ends of which are to refuse and deny this mixing of similarity-in-difference, but rather to assert the separation of categories. The distinction lies between how and what: the method is open in its capacity to draw differences together through similarity but what this method may be applied to can contradict these qualities. This is exemplified in Pitt-Rivers writing, and the quote below in which he extends the evolutionary analogy from words and ideas, in order to demonstrate why different racial and cultural types cannot mix. He writes as with ideas, 'so in the breeding of animals':

> So when the development of ideas has run in distinct channels far enough to create a hiatus, no intercommunication can take place.[219]

He then extends the analogy to apply it to cultures and nations:

> Or two nations in very different stages of civilization may be brought side by side, as is the case in many of our colonies, but there can be no amalgamation between them. [220]

Evolutionary anthropology was based upon this idea of class and type, but in Pitt-Rivers's case perhaps what it lacked was a 'sophisticated' theory of analogy, capable of the 'fine-grained' discernment advocated by Stafford. Stocking makes another point regarding his analogy of the archive with the field in that

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217 Stafford, *Visual Analogy: Consciousness as the Art of Connecting*, p. 32.

218 Stafford, *Visual Analogy: Consciousness as the Art of Connecting*, p. 51.

219 Pitt-Rivers, 'Principles of Classification 1874', *Evolution of Culture and Other Essays,* p. 19.

220 Pitt-Rivers, 'Principles of Classification 1874', *Evolution of Culture and Other Essays,* p. 19.

this personal and professional experience had furnished him with what he calls 'a vivid sense of the difficulties of translating categories across cultural and linguistic barriers'.[221] I propose that Pitt-Rivers's analogous thinking does not take care of the difficulties of what Stocking calls 'translating categories'[222] and what I will term the transpositions across boundaries. What is missed in Pitt-Rivers ethnographic analogical method is an awareness of the displacement and distortion that is undergone in transposition, the change at a crossing of a boundary between mediums, and, I would say, this omission is itself analogous to failing to take into consideration the phenomenon of refraction.

221 Stocking, *The Ethnographer's Magic*, p. 13.

222 Stocking, *The Ethnographer's Magic*, p. 13.

Fig 1.14

Immediacy *If Found, Please Return Immediately*

> That seventeenth-century English natural philosophers knew that there were such things as icebergs and polar bears was on no other basis than what they were told by those who had seen these things, for few, if any, of them had seen them for themselves.[223]

The above quote from Shapin comes from the continuing discussion of the view from nowhere in science. Shapin argues that those who had directly observed either far-off lands or the results of scientific experiments were few and the knowledge thus acquired relied upon its link to reliable witnesses in order to travel (Fig 1.14): 'The trust relationship is central to the very idea of empirical science'.[224] For those scientists, knowledge of things at a distance depended upon what Shapin terms 'practical solvents to scepticism'.[225]
And this, Shapin argues, was resolved by the embodiment of the carrier of testimony in the appropriate 'gentlemanly' form.[226] An example of this can be found during the heroic era in the story of the American Robert Peary's claim of reaching the North Pole. On his arrival at the Pole on Sixth of April 1909, Peary wrote the words:

> The Pole at last. The prize of three centuries. My dream and goal for twenty years. Mine at last![227]

That racial prejudice played a part in invalidating testimony can be inferred from the following accounts of Peary's achievement. The above journal entry was introduced in Augustine Courtauld's 1950s anthology of polar writing; in this text the indigenous participants in the expedition do not merit naming, and Peary's co-explorer is identified as a servant: 'with his negro servant Henson and four Eskimos, made the final march'.[228] Peary's achievement lacked suitable corroborating witnesses.

> Peary had left his white colleagues behind, retaining only a faithful negro and

223 Shapin, 'Placing the View from Nowhere', p. 7.
224 Shapin, 'Placing the View from Nowhere', p. 8.
225 Shapin, 'Placing the View from Nowhere', p. 8.
226 Shapin, 'Placing the View from Nowhere', p. 8.
227 Robert Peary, cited in Courtauld, ed., *From the Ends of the Earth*, p. 312.
228 Courtauld, ed., *From the Ends of the Earth*, p. 309.

> four inarticulate Eskimos as witnesses of his success.[229]

In fact, the four Inuit were named Oatah, Egingwah, Seegloo, and Ookeah, and the African-American, Matthew Henson. In a 1948 biography of Henson, Bradley Robinson *did* write of him as an explorer, but a reviewer described the book as 'rather peculiar' and gives further insights into the ongoing racialised dimension of polar exploration:

> although Peary's journeys are the main theme, it is quite obvious that the main purpose of the book is the exaltation of the negro. It is basically negro propaganda with an Arctic back-ground.[…] This constant harping on Henson as the type of negro hero who conquered even the North Pole in a world full, or almost full, of wicked whites spoils a very vivid piece of popular biography, as far as the Polar chapters are concerned, reasonably true to fact. [230]

Historical reinterpretations have by degrees retrieved Matthew Henson from this second-class status within the history of exploration.[231] As regards witness, those perceived as qualified to give undistorted and transparent testimony were identified along criteria of race, gender, age, and class. The interpretations of Peary's reaching the North Pole were significantly refracted by racial prejudice.

> The facts of history never come to us 'pure', since they do not and cannot exist in a pure form; they are always refracted through the mind of the recorder.[232]

Edward Hellett Carr describes above the thinking on history that emerged through writers such as Wilhelm Dilthey and Robin George Collingwood. Like history and its records, I suggest that archives are 'refracted through the mind' of the observer. Far from transparent or immediate, views are modified by these interpretations. Wilson's Antarctica as encountered through the archive is, then, doubly refracted, once through Wilson's interpretation and then through the historical gap by which the present interprets the past. And

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229 L.P. Kirwan, 'North-South', *The Spectator,* 29 July 1948 <http://archive.spectator.co.uk/article/30th-july-1948/22/north-and-south> [7 October 2014], p. 22.

230 Kirwan, 'North-South', p. 22.

231 Henson was posthumously given the 'honor long overdue' in 2000 of 'The Hubbard Medal for distinction in exploration, discovery, and research' by the National Geographic Society, at the research centre that now carries his name – the Matthew Henson Earth Conservation Centre, Washington D.C. See Anna Brendle, 'Profile: African-American North Pole Explorer Matthew Henson', *National Geographic News*', 15 January 2003, <http://news.nationalgeographic.com/news/2003/01/0110_030113_henson.html> [7 October 2014].

232 Edward Hallett Carr, *What Is History?* (Basingstoke: Palgrave Macmillan, 2001), p. 16.

the validity of the witness carried rests on the credentials of the observer.

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Fig 1.15

Medium *Refractive Index*

In *Objects and Selves* James Clifford describes collecting and display as 'crucial processes of Western identity formation' whether as gathered objects in 'curio cabinets, private living rooms, museums of ethnography, folklore, or fine art'.[233] Whatever is in an archive has been 'collected' with purpose, and, as Clifford puts it, is part of a 'ramified system of symbols and values' constituted out of what 'specific groups or individuals choose to preserve, value or exchange'.[234] In the second aspect it is part of the subject's assertion of himself or herself in the world, and the larger form that this takes is the collection.

Wilson made an album of childhood drawings between the ages of six and twelve, which he gave to his parents as a gift; his own inscription dedicates the album and names it as a 'collection of drawings'.[235] Many of the pages have a sense of formal arrangement of examples by type: a page of ships, a page of houses.[236] Yet on other pages there is a more incongruous mix: nature studies and bloody battles, uniformed soldiers and exotic animals. There are many drawings of soldiering exploits, and many sketches of British troops in their red jackets and white trousers dealing with attacking natives in African campaigns. (Fig 1.15)[237] On one page we find a series of unequal meetings, such as a polar bear encountering a seal, a conquistador meeting a turkey. These are located amongst other single figures of a hyena, a fox, a native, and in the centre a figure in a green loincloth, his hands held high grasping snakes (Fig 1.16).

Wilson's album is now held at the Scott Polar Research Institute. It gives an insight into the milieu and imaginary and artistic world of Wilson as a boy and the subjects that caught his interest. One full-page portrait depicts

233 James Clifford, 'Objects and Selves', in *Objects and Others: Essays on Museums and Material Culture*, ed. by George W. Stocking (Wisconsin, London: University of Wisconsin Press, 1985), p. 239.

234 Clifford, '*Objects and Selves*', pp. 240–41.

235 Scott Polar Research Institute (SPRI), Accession: Y:69/10/1/2 Album of childhood drawings. Drawings by E.A.Wilson, with written inscription 'For my dearest mother from Ted – a collection of drawings from 1878 to 1884 Feb', Here after 'Album of Childhood Drawings'.

236 Wilson, 'Album of Childhood Drawings ' p. 6.

237 Wilson, 'Album of Childhood Drawings', p. 10.

'A Kaffir Chief' (Fig 1.17). The 100 Years War was fought in South Africa by British and Boers against the Xhosa, then referred to as Kaffirs. It consisted of nine wars culminating in the 1877–1878 war, which was, in fact, an extended period of resistance to European colonisation. On meeting with Kaffirs in South Africa, Wilson, demonstrating acknowledgment for colonialism's culpability, noted in his diary: 'one feels that their degeneration has been the direct result of our occupation'. But this sympathy for the Kaffirs' plight is quickly superseded by the expression of a feeling that recoils at empathetic identification with their circumstance: 'Perhaps the worst side of it is by far is to see white derelicts wallowing in the idleness and dirt of these degenerate Kaffirs on equal terms'.[238]

The prefaces to the subsequent second, third and fourth editions of 1892, 1899, and 1912 of *Notes and Queries* span the period of Wilson's life. Pitt-Rivers had the notion that an ethnographic comparison would be useful:

> A series of native drawings by children of different ages from five or six upwards, would be interesting as a means of comparison with the development of artistic skill in Europeans.[239]

To this end one might imagine that the drawings in Wilson's album and drawings by the Kaffir Chief's children might be put side-by-side for comparison. Developments in anthropology can be traced in the modifications and alterations that the editions of *Notes and Queries* undergo. In the first edition drawing is initially thought of as an ethnographic object of study, as an artefact or practice for anthropological analysis. In fact those drawings by natives were not considered to be artistic expressions. The second edition of *Notes and Queries* adds sculpture to the end of the drawing section. And in subsequent editions there is the possibility that these sections might be given the heading 'art'.

Drawing was not proposed in *Notes and Queries* as a method that the anthropologist himself might use in the field for gathering data. If it were not to be a field method, then it did seem to have a place as a method in the museum. Pitt-Rivers had noted, in one of his lectures, that drawing was a skill

238 Edward Wilson, *Diary of the 'Terra Nova' Expedition to the Antarctic 1910–1912* (London: Blandford Press, 1972), p. 40.

239 Lane Fox, 'Drawing', *Notes and Queries*, 1st edn, p. 120.

that went hand in hand with museum learning. It was, Pitt-Rivers proposed, the way in which to make children (presumably boys such as Edward Wilson) able to appreciate the forms that were laid before them in displays.

> The Art of Drawing, which is now very properly becoming a compulsory part of even the most elementary education, by training the eye to a correct appreciation of form, will ~~generally~~ [insert] greatly [end insert] increase the capacity of our children for profiting by the kind of instruction that Museums are capable of affording. These and other considerations lead me to the conviction that Museums are destined to play an important part [insert] in [end insert] the [insert] education of [sic][end insert] future.[240]

Drawing was here suggested as a technique by which children could learn from artefacts once they had been gathered by the anthropologist or traveller in uncivilised lands, and properly assembled in a typological display by a cognisant curator.

The drawings in Wilson's album refract the historical context of the world that Wilson inhabited in the late nineteenth century, in that they show aspects of that period that were of interest to Wilson as a boy. I suggest that we can think of a historical period as a medium. Phillip Ball says in his study of colour, 'The Medium matters: That color is a treacherous thing is a lesson learned in childhood'. Ball points out that things can appear quite differently according to the effects of medium 'light is affected by its passage from one transmitting medium – say air – to another, such as water'.[241] Refractive index determines how light is dispersed. Medium matters in terms of the historical context too.

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240 Lane Fox, 'On the Uses and Arrangement of Arts Museums 1889–1890'

241 Philip Ball, *Bright Earth: Art and the Invention of Color* (New York: Farrar, Straus and Giroux, 2001), pp. 34–35.

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Fig 1.16

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Fig 1.17

No More Elsewhere *No Where Else*

> Thus something that might be called there and then is implicated in the here and now. 'Here' is an intertwining of histories in which the spatiality of those histories (their then as well as their here) is inescapably entangled.[242]

Doreen Massey writes the above in summing up her spatio-temporal understanding. In this chapter I explore Massey's entangled relation between spatial and temporal elsewheres in nineteenth-century geography and anthropology. The phrase 'no more elsewhere' encapsulates contradictory temporal and spatial pulls that invite consideration of how geography and history are refracted through each other.

In terms of the temporal and spatial relation to be found in modernity, Massey gives a particular description of how modernity has conceived of space as divided into discrete places, which were then organised into temporal sequence.

> In brief, spatial difference was convened into temporal sequence. Different 'places' were interpreted as different stages in a single temporal development. All the stories of unilinear progress, modernization, development, the sequence of modes of production… perform this operation.[243]

Massey writes, in the 'turning of the world's geography into the world's single history' modernity thereby 'render[s] coexisting spatial heterogeneity as a single temporal series".[244] I have suggested that Massey's description of this 'characteristic manoeuver of modernity'[245] can be identified in avant-garde modernist art, Pitt-River's typological ethnographic arrangements, and social Darwinism. Massey adds that:

> in these conceptions of singular progress (of whatever hue), temporality itself is not really open. The future is already foretold; inscribed into the story.[246]

Massey continues by citing the work of Johannes Fabian[247] on the anthropological gaze, in which the anthropological observer puts the object

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242 D. Massey, *For Space*, p. 139.

243 D. Massey, *For Space*, p. 68.

244 D. Massey, *For Space*, p. 68.

245 D. Massey, *For Space*, p. 68.

246 D. Massey, *For Space*, p. 68.

247 Johannes Fabian, *Time and the Other: How Anthropology Makes Its Object* (New York: Columbia University Press, 1983).

of the gaze into a different time, even as the anthropological observer is in the field observing the object of the gaze, thus resolving the paradoxical requirement for immediacy and distance. This displacement elsewhere is a temporal one. The paradoxical demands of observation for simultaneous proximate witness and distanced overview were resolved by constructing temporal distance. In terms of the geologising metaphor, this displacement of ethnographic others into a different time was a way to create distance, even as the observation was made at first hand – thus putting ethnographic others *back* into past history. This also produced the conditions by which they were consigned *to history*. This teleology assumed that they were temporal anomalies, heading for extinction, dead already, which then resulted in deadly consequences.

As demonstrated by the previous example in ethnographical encounter, the criteria by which observation was established, those temporal and spatial relations to the object of observation, helped to construct the subjectivity of both observer and his (or her) object of observation in crucial ways. *Notes and Queries* and *Hints to Travellers* contributed to the development of standards by which to make observations in the field.[248] This standardisation of observational practices was part of a more general Victorian push towards creating standards, notably with the establishment of the standard of time at Greenwich Meridian in 1884.[249] Thus I aim to argue that the observational drawing of ethnographic others and that of the landscape that Wilson made in Antarctica were not distinct fields of endeavour, but rather were part of the same historical discourses on observation.

Through Wilson the shifts between histories of different disciplines or different scales can be noted. The human history of Antarctica, in which Wilson had a part to play, is an extremely recent one. The history of the geology of Antarctica met the history of human dimensions in the era of exploration. During the nineteenth century, with expanding geological knowledge and the theory of evolution by natural selection, the time of human history encountered the time of natural history. In recent years the human

248 See in this chapter the section titled 'Notes and Queries'.

249 Kern, *The Culture of Time and Space, 1880–1918,* p. 2.

and geological scale has coincided in the new era of the Anthropocene, a term coined by Paul Crutzen and Eugene Stoemer in 2000 to describe the new geological age in which human behaviour is geologically measurable.[250] In geology it is strata that define epochs. This is another example in which spatiality and temporality are combined. Crutzen dates the Anthropocene from the industrial development of the 1790s steam engine and the industrial revolution. From that date, he argues, a layer of carbon is laid down in a measurable stratum in the ice cores. The British Stratographic Commission will make a decision in 2016 as to whether it accepts the nomenclature as a formal geological term.[251] The Anthropocene supersedes the Holocene: the last 10–12,000 years of relative climate stability, in which the colonisation of the planet by humans has occurred.[252]

Freud's topological metaphors for the psyche are often compared to strata, the divided mind between layers of conscious, preconscious and unconscious. Freud's anecdote in 'A Disturbance of Memory on the Acropolis'[253] also traverses temporal layers: old age, middle age and childhood. In it he finds that his recollection of a childhood yearning for a far distant elsewhere, which also happens to be the ruins of an earlier historical time, was subject to a distortion. Freud wanted to analyse the falsifications of the past in our unconscious. Although Freud's approach to psychoanalysis followed a clear narrative development from neurosis, through interpretative analysis, to cure, he also offered many insights into the temporality of the psyche, figuring it as made up of concurrent mixings, as in Doreen Massey's characterisation,[254] of other times and other spaces.

Freud's dream interpretation also provides tools to deal with denial and disavowal with regards to psychological interference with observation. For this thesis, I have taken Freud's *Entstellung* as a dream interpretation

250 Paul J. Crutzen, 'Geology of Mankind', *Nature,* **415,** 23 (2002).

251 Subcommission on Quaternary Stratigraphy, Working Group on the 'Anthropocene', 2015 <http://quaternary.stratigraphy.org/workinggroups/anthropocene/> [15 June 2015].

252 Crutzen and Schwärgerl 'Living in the Anthropocene: Toward a New Global Ethos', <http://e360.yale.edu/feature/living_in_the_anthropocene_toward_a_new_global_ethos/2363/> [15 June 2015].

253 Freud, 'A Disturbance of Memory on the Acropolis', pp. 447–56.

254 D. Massey, *For Space*, p. 139.

method comparable to the performance of elsewhere. The observation of the Anthropocene asks us to face the reality of climate change. In some people's current attitudes there is the conversion of a spatial elsewhere to a temporal elsewhere in relation to climate change. Sally Weintribe's edited compilation of essays, *Engaging with Climate Change: Psychoanalytic and Interdisciplinary Perspectives,* investigates denial and disavowal of climate change. In Weintribe's introduction she states:

> Many people who accept anthropogenic warming continue to locate it as a problem of the future – one for our children and grandchildren – and one that is still largely avoidable and reparable.[255]

In this sense the *No More Elsewhere* of my thesis title is a rejection of this form of denial; instead I wish to insert the concept of *Entstellung* as one that can be used to analyse and recognise, so to refuse the displacement of the occurrence of climate change onto an elsewhere of the future.

I propose that in order to understand our contemporary interpretations of climate change and the consequent will or refusal to act, we require these psychoanalytical and historical perspectives. We need to appreciate the recursive relations between observation in the field and the archive. As guide or warning we can look to the challenges that the Victorian geologist faced reading the rock strata. Retrieving a narrative in the absence of the original context is similar to the task encountered in archival research in which archival sources, in sometimes redundant mediums, are interpreted. Our new perspectives can refract them quite differently. For example, in a glass magic-lantern slide in my possession there is depicted the now inscrutable indications of an Edwardian geologist in a quarry circa 1900. He is pointing to something in the rock face. What is he trying to indicate with his walking stick stretched out towards some stratum above his head? (Fig 1.17). This Edwardian geologist in his turn has become a fragment of an archive – pointing out a past event marked in the geology. Might he be telling us of our future legibility in the geological record as a warning to a future yet to come: 'You will have been here'?

Claire Colebrook, in 'Scale and Refuge: Twilight of the Anthropocene' writes:

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255 Sally Weintrobe, *Engaging with Climate Change: Psychoanalytic and Interdisciplinary Perspectives* (London, New York: Routledge, 2013).

> Even if there is no retrieval of a pre-Anthropocene world…one might think, in these closing days in the light of what we know – of living as if other temporalities and planes were possible.[256]

Colebrook seems to be saying here that no other future is possible, but that we must think *as if* it were possible.

> We might imagine, from the closure of the Anthropocene, other human histories that were not actualized but that haunt the present.[257]

I agree with thinking 'as if', but, in contrast to Colebrook's assertion that:

> It is not possible now to argue for the redemption or refuge that might be achieved by turning towards eco-feminist, Indigenous or nomadic forms of human dwelling.[258]

I do think that turning towards aspects of the 'eco-feminist, Indigenous or nomadic' might be productive. There is no possible 'retrieval of a pre-Anthropocene world' but the archive might offer us a way of 'living ***as if*** other temporalities and planes were possible'.

In his essay *An Archival Impulse*, Hal Foster writes about what he calls the 'no-place' of the archive. Here he identifies what he calls 'the archival turn in contemporary art', which he argues demonstrates a wish:

> to turn belatedness into becomingness, to recoup failed visions in art, literature, philosophy, and everyday life into possible scenarios of alternative kinds of social relations, to transform the no-place of the archive into the no-place of a utopia.[259]

This Foster connects with social utopianism unencumbered by the previous embarrassment of its connection to failed projects of Left and Right modernisms. Foster writes about those art works made from engagement with the archive as showing a desire for reconstruction to come out of those 'excavation sites', the 'no-place' that is the archive.[260] Foster notes a turn away from the idea of history as only traumatic, towards a utopian view into the future. The kind of archival engagement that Foster describes uses

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256 Colebrook, 'Scale and Refuge: Twilight of the Anthropocene', paper presented as part of 'Situating Architectures Lectures' at the Bartlett School of Architecture, UCL, London, 12 January 2015, p. 4

257 Colebrook, 'Scale and Refuge: Twilight of the Anthropocene', p. 4.

258 Colebrook, 'Scale and Refuge: Twilight of the Anthropocene', p. 3.

259 Hal Foster, 'An Archival Impulse', *October,* **110** (Fall 2004), pp. 3-22, p. 22.

260 Foster, 'An Archival Impulse', p. 22.

the term 'reconstruction' to suggest rebuilding something as it was before. Foster's reference to the way that artist's hope to 'recoup failed visions'[261] of utopianism also shares reconstruction as the method. The artist goes to the archive as a source of old utopias to take back in to the world. I suggest that a method of refraction rather than reconstruction might produce a different and unanticipated elsewhere. Might the archive offer a place out of which to construct these futures, or, as Foster terms it 'to turn belatedness into becomingness'?[262]

In answering this question, a great deal depends upon how one narrates the story, on how one makes history out of these geographies, and concurrently how one attributes the geographic and spatial to these histories. Returning to Massey and the 'characteristic manoeuver of modernity',[263] which produces a future that is no longer open, the story already told, is like the progress of a biography towards the closure of death. These terminal biographies are especially tempting with regard to heroic and tragic stories such as Wilson's. But I propose that writing zoegraphically can flatten out the temporal escalating sequence into a horizontal spatiality. This horizontality can also work against the discourse of social evolutionism that consigns primitive people to a narrative of their predestined deaths. I also suggest that this horizontality of zoegraphy can work against those discourses of climate change that either locate climate change in a temporal elsewhere, or close the future into our inevitable extinction.

261 Foster, 'An Archival Impulse', p. 22.

262 Foster, 'An Archival Impulse', p. 22.

263 D. Massey, *For Space*, p. 68.

Fig 1.18

Chapter Two *Chapter Four*
Watercolour *The Colour of Water*

Fig 2.1

In the Open Air *Air Conditioning*

Wilson brought his skills as a draughtsman and watercolour painter to bear upon the landscape of Antarctica in order to document and interpret the landscape for the waiting eyes of people elsewhere (Fig 2.1). According to Tony Rice, the British history of watercolour painting was associated with the expanding empire of this maritime colonial power and had been used as a tool of topographical description by its naval explorers.[264] David Blayney Brown has described watercolour's use as a device for mapping the world in the drawings and paintings, made from the sea, of the coastlines of new lands.[265] It certainly was instrumental in establishing the data sets by which to extend imperial power, and an instrument of exploration.[266] The artistic genealogy of watercolour is rooted in the style of early English landscape artists such as Paul Sandby (1731–1809) [267] and the military tradition of survey drawing; [268] young army officers were taught to draw landscape as part of their military training, since a close understanding of the terrain in which they were fighting was considered essential in places where territorial gains might be significantly linked to strategic application of topographic understanding: through the advantage gained from knowing the high points or natural barriers of a country, a battle might be won.

During the so-called 'golden age of watercolour innovations', according to Nicola Moreby, artists, such as John Cozens (1752–1797) and Thomas Girtin (1775–1802) 'abandoned the strictures of the tinted drawing and began to depict form and atmosphere with pure washes of colour, directly applied on

264 See Tony Rice, *Voyages of Discovery: Three Centuries of Natural History Exploration* (London, Hong Kong: Scriptum Editions, 2000).

265 David Blayney Brown, 'Watercolour: Practice to Profession', in *Watercolour,* ed. by Alison Smith (London: Tate Publishing, 2011), pp. 32–35, p. 33.

266 *Geography, Technology and Instruments of Exploration, c. 1780–1960*, workshop held on 16 May 2012 at Royal Geographical Society, London.

267 Alison Smith, 'Introduction', *Watercolour*, ed. by Alison Smith (London: Tate Publishing, 2011), pp. 9-21, p. 17.

268 Matthew Imms, 'Travel and Topography', in *Watercolour,* ed. by Alison Smith (London: Tate Publishing, 2011), p.72. and David Blayney Brown, 'Watercolour: Practice to Profession', p. 33.

the paper'.[269] At the turn of eighteenth to the nineteenth century, the use of oil paints in sketching from nature was a common practice, used by artists such as J.M.W. Turner (1775–1851) and John Constable (1776–1837). What was new in Turner and Constable was the desire to bring the quality of observation direct from nature back into the studio and to realise this in finished work. According to Anne Lyles, the portable nature of watercolour and pencil and their capacity for being used at speed also made them suitable for 'capturing the rapidly changing atmospheric effects'.[270]

In Britain, during the nineteenth century, according to Moorby, as watercolour was increasingly established as a valued form of painting, so too was the medium enthusiastically taken up by the amateur artists, and by travellers on the Grand Tour or on more local excursions, thus creating an increased demand for new products, which were provided by companies trading in artists' materials.[271] Philip Ball notes that the development of the golden age of British watercolour also went hand in hand with the innovation that made paint portable in ready-mixed tubes and that the popular enthusiasm for amateur watercolour painting encouraged the commercial development of new products.[272] With the invention of the metal paint tube in the 1840s, the artist was no longer beholden to the grinding and mixing of pigments in the studio.[273] In 1842 William Winsor added to this metal tube the patented 'collapsible screw cap mechanism', thus creating what was to become 'standard container for colour'.[274]

Matthew Imms in his book *Travel and Topography* describes the commonly held notion of practice that is associated with watercolour:

> To some, the very word 'watercolour' may evoke an image of the artist sitting on a folding stool at some convenient viewpoint with portable equipment and

269 Nicola Moorby, 'Water + Colour: Exploring the Medium', in *Watercolour*, ed. by Alison Smith (London: Tate Publishing, 2011), p. 30.

270 Anne Lyles, 'John Constable and "Natural Peinture"', in *Turner and Romantic Nature* (Statens Museum for Kunst, 2004), p. 215.

271 Moorby 'Water + colour: Exploring the Medium', p. 24.

272 Ball, *Bright Earth*, p. 179.

273 Ball, *Bright Earth*, p. 180.

274 See Timeline on Winsor & Newton website <http://www.winsornewton.com/uk/discover/about-us/timeline> [2 September 2014].

> a jar of water to hand, working directly from the subject.[275]

Claudia Muscovici explains that painting outdoors, in natural light, was known as *en plein air* because of its association with the Barbizon School, a precursor to Impressionism.[276] The *en plein air* artists, in contrast to a classical tradition in which hours were spent painting in the studio on pieces worked up from sketches and in reference to other works, had instead a sensibility for the play of light on ever-changing scenes of landscape, for atmospheres and the primacy of observation and perception. George Seaver, Wilson's biographer, asserts that Wilson 'would without a doubt have recoiled with disgust from those bizarre productions (happily ephemeral) which masquerade as works of art under the name "impressionist"'.[277] However, after taking a closer look at the British artists that Wilson admired, this assertion may be hard to uphold. Elements consistent with Impressionism were explored in some of these artists' works, such as Henry John Yeend King (1855–1924), a British Realist; Beatrice Emma Parsons (1869–1955), whose work was classed under 'Victorian and British impressionist pictures'[278] and Thomas Miles Richardson Jnr (1813–1890), a watercolour artist.[279]

As an explorer, Wilson was at the forefront of such people travelling the furthest geographical distances on an unmapped continent, but as an artist he was far from avant-garde: his art was dominated by the influence of John Ruskin's thinking, and indebted to the innovations in watercolour of Turner as a landscape artist. Seaver quotes Wilson's friend and fellow explorer, Apsley Cherry-Garrard:

> Wilson himself set a low value on his artistic capacity. We used to discuss what Turner would have produced in a land which offered colour effects of such beauty.[280]

Sub-zero conditions make watercolour a challenging medium in Antarctica. Drawing, too, was often very difficult in the freezing cold. As Cherry-Garrard

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275 Imms, 'Travel and Topography', p. 73.

276 Claudia Moscovici, *Romanticism and Postromanticism* (London: Lexington Books, 2010), p. 66.

277 George Seaver, *Edward Wilson Nature-Lover*, p. 83.

278 Christie's, 22 July 2009 <http://www.christies.com/lotfinder/paintings/beatrice-emma-parsons-a-robin-in-a-5224910-details.aspx.> [5 Oct 2014].

279 Seaver, *Edward Wilson Nature-Lover*, p. 83.

280 Apsley Cherry-Garrard quoted in George Seaver, *Edward Wilson of the Antarctic,* p. 262.

described, the problems were caused by one's own physiology:

> Yet as soon as you breathed near the paper it was covered in a film of ice through which the pencil would not bite.[281]

The grain of the paper provides the 'bite' for the pencil or paint to adhere to; if it is too smooth the pencil will not take. The body intervened in ways that were hard to overlook. The suffering of those hands and eyes were expressed in Wilson's first-person account:

> My eyes have been in a sorry state all day from sketching with sun-glare, streaming with water and very painful from time to time. Sketching in Antarctica is not all joy, for apart from the fact that your fingers are all thumbs and you don't know what or where they are till they warm up again, you can only sketch when your eyes stop running – one eye at a time through a narrow slit in snow-goggles.[282]

A vivid document of Wilson sketching in the 'open air' is to be found in a photo taken by Scott dated 13 December 1911 (Fig 2.2).[283] At this stage, the polar party of five had gone on alone. This photo was taken as they set up camp during their trek along the Beardmore Glacier. It shows a panorama later compiled by Herbert Ponting after the negatives had been retrieved from the tent in which three of the polar party had died. In this photograph Wilson sits with his back to the camera, next to the canvas tent, sketching the view beyond. To the right of the picture hang a pair of frozen socks. This photograph of the artist confronted with the wide-open landscape of Antarctica as he observes and draws seems to suggest itself as the immediate engagement of *en plein air*, and as an illustration of the open-air watercolourist at work. It is very reminiscent of the description that Imms gives in *Travel and Topography,* in which he goes on to say that:

> a finished watercolour as opposed to a sketch setting down keynotes of colour and form for later development, is historically as likely to have been a studio production as a landscape painted in oils would be. This was the general case with Turner, whose practice moved from large, elaborately detailed pencil studies with watercolour towards an intellectualized process of rapid line

281 Apsley Cherry-Garrard, *The Worst Journey in the World* (London: Pimlico, 2003) [first published 1922], p. 253.

282 Extract from Wilson's diary quoted in Seaver, *Edward Wilson of the Antarctic*, pp. 118–19.

283 Robert Falcon Scott, 13 December 1911, *Dr. Edward Wilson sketching on Beardmore Glacier during his final expedition to the Antarctic in 1911–1912* (glass plate negative), SPRI, P2005/5/1708. Variation panorama made by Ponting from Scott's original negative.

notations in small sketchbooks.[284]

The impression that this photograph gives of Wilson making watercolours in the open air is quickly displaced. Much of his watercolour work, like Turner's before him, was made away from the scene, transposed to the relative comfort of the hut-studio.

284 Imms, 'Travel and Topography', p. 73.

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Fig 2.2

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Fig 2.3

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Fig 2.4

A Lecture on Sketching *Participant Observation*

Note-making was integral to the way in which Wilson made watercolours in Antarctica.

> His method was to make rapid pencil-sketches in the open, supplemented with copious notes of colour effects for greater accuracy, and then work them up immediately by lamp-light in his cabin.[285]

Wilson's field sketches were produced quickly out in the open air, as annotated topographies with the colour observations inserted into the shapes of the landscape. The textual descriptions became an arrangement of hand-written lettering indicating the positions of the colours noted (Fig 2.3). These pencil sketches all constituted a well-marked effect to be worked up later, sometimes the following day in the cabin or hut, and sometimes at leisure during the years that intervened between Wilson's first and second expeditions. His methods were 'the result of necessity long ago in Norway'[286] where he had trained his ability to recall and remember colour. The Antarctic conditions demanded that he develop this technique further.

Wilson's notes followed the shape of the lines drawn, of the sea, of the hatched surface of a slope of mountain rock and the line of the horizon. Along with annotating the surface of the drawing with dynamic textual descriptions of the colours, he frequently listed the date and time of the sketch, as well as notes on the weather. The following transcription of one of his drawings illustrates all the above. The side notes detail time, date and conditions, 'Dec. 21.10 at 10 pm Water sky. S & W. cloudless weather, blowing to SE'. The colour notes on the sky are to be read from the horizon moving upwards, as follows (Fig 2.4):

> Lilac or pure grey to palest yell. ochre white to cobalt v. pale to deep blue(French)[287]

Another preparatory sketch in the notebooks is untitled but dated 'Aug. 17.11 2.45 pm'. At the top centre can be read 'lavender grey' above 'lemon yellow',

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285 Seaver, *Edward Wilson of the Antarctic*, p. 119.

286 Cambridge, SPRI, Edward Wilson MS 1225/3 Lecture notes [1910–1913] prepared during the expedition on the following subjects: penguins, Antarctic birds and sketching. 77 leaves, holograph (Xerox).

287 Edward Wilson, untitled drawing (pencil on paper), SPRI, N: 1954. [21 Dec. 1910 10pm.1910]

with 'yellow ochre' to the left and 'puce' to the right. Centrally below this is 'purple', close above 'vivid carmine orange' which is above 'dark purple', then 'grey not lit at all', after which there is a broad scrawl that looks, at first glance, like a topographic feature but, at second glance, is legible as an expanded typography which reads 'dark grey' (Fig 2.5).[288] There are a number of drawings like this in which typography becomes topography; descriptive lines of text become integrated into the structure of the drawing, appearing like striations of geological rocks[289] (Fig 3.9). Wilson also often added scientific observations to his sketches, by giving geological interpretations of the rocks or by classifying cloud formations accurately.

Wilson was an avid reader of Ruskin's writing on art and took a copy of his book *Modern Painters*[290] on the second expedition to Antarctica in 1910. In the 'notes towards a lecture on sketching'[291] that Wilson prepared for the lecture he gave to his fellow expedition men in the Hut, Wilson referred to Ruskin a great deal. Wilson delivered three lectures, one on sketching and the other two on natural history. On Wilson's lectures Seaver writes 'the characteristics' were 'their simplicity and clarity'.[292] And Scott, commenting on the lecture on sketching, wrote in his diary that the theme was 'the extreme importance of accuracy, his mode of expression and explanation frankly Ruskinesque,.[293] Wilson's 'notes towards a lecture on sketching' can be read in his pencil hand-script in papers that survive in the Scott Polar Research Institute archive:

> I am not a drawing master and never have been. Ruskin was a real teacher and I have his book – and I have gone through it and noted down what I believe to be the soundest principles teachable. Only they repeat themselves a good deal or they are very disjointed. Still – they are exceedingly useful, and anyone

288 Edward Wilson, untitled drawing (pencil on paper, 13.8 x 8.8cm – album 36.5 x 26.5cm), Vol. II : Landscapes, analytical drawings of ice crystals and earth formations, with explanatory notes, SPRI, 1802/68.

289 Edward Wilson, *Observation Hill* (pencil on paper, 25.5 x 20.2cm – album page 36.5 x 26.5cm) Vol. II: Landscapes, analytical drawings of ice crystals and earth formations, with explanatory notes, SPRI N:1802/45.

290 John Ruskin, *Modern Painters,* Vols I–V, 5th edn 1888 (London, New York: John Wiley & Sons)

291 Edward Wilson, 'Notes for a Lecture', Scott Polar Research Institute, Cambridge, MS 1225/3. Lecture notes [1910–1913] 77 leaves, holograph (Xerox). All subsequent references are listed as 'Notes for a lecture' MS 1225/3.

292 Seaver, *Edward Wilson of the Antarctic*, p. 239.

293 Scott quoted in Seaver, *Edward Wilson of the Antarctic*, p. 240.

> who hopes to draw must either have them in them instinctively – as so many Japanese and as all real artists have – or he must acquire them, if he can.[294]

Wilson advises that the talent for art should be achieved through effort in acquiring the skill, by following the teaching of Ruskin, or be innate, found naturally, as an instinct inborn, as exemplified in the Japanese, for whom Wilson had significant regard. 'He had the greatest admiration for those masterpieces, as for example the Japanese, which are the result of prolonged and intensive contemplation'. [295]

As concerned the aspiring sketcher in Antarctica, Wilson advised that all Ruskin's advice must be modified by what Wilson refers to as 'two facts':

> These two facts simplify ~~the whole thing~~ sketching down here[296]

The first fact: that the objective of the endeavour is a descriptive and documentary one:

> For in the first place one has always to bear in mind that in drawing anything, one's object is to reproduce what actually is to be seen here as accurately as possible.[297]

Wilson, on a number of occasions during his lecture, stresses the responsibility of the artist in Antarctica to make true and representative images of the country before him: he asserts an obligation to realism and naturalism:

> Sketching in a country such as this, which has been seen by a very small number of people who are likely to see the sketches brought home, it is obviously out of place to swing off too freely on the imagination. Therefore a real artist, that is, an imaginative 'painter-fellow', would be wholly out of place here.[298]

Wilson goes on to try to articulate the balance required between truth and artistry. In Wilson's formulation what is needed is characterised as a 'pure copyist' but with 'an artistic sense':

> What is wanted here is a copyist. If he is what is called artistic so much the better, but *only* because he will then have some idea of what, amongst the innumerable things before him, is representable in a picture – that is, of what will make a picture. I am quite certain that a pure copyist with an artistic sense will always do a more useful work in these regions than a really imaginative

294 Wilson, 'Notes for a Lecture' MS 1225/3.

295 Seaver, *Edward Wilson Nature-Lover*, p. 83.

296 Wilson, 'Notes for a Lecture', MS 1225/3.

297 Wilson, 'Notes for a Lecture', MS 1225/3.

298 Wilson, 'Notes for a Lecture', MS 1225/3.

> artist, and you see this in our photographer who has so much of this artistic sense that every picture he makes, though it is as true to nature as photography can make it, is never the less a picture in the true sense of the word, full of composition, full of suggestion, and a thing of art because properly chosen.[299]

Wilson is searching for a definition of the sort of artist that would be sufficient to the special task of representing Antarctica. From Wilson's lecture notes, it is clear that it was his ambition to be true to the reality of what was before him. The aim is towards usefulness:

> Sketching down here is a very different thing to sketching in other parts of the world. One is very limited as to the methods. Pencil and chalk are the only things possible out of doors – and except in [the] height of summer it is impossible to sit long out of doors making finished sketches. Again one's object is different. One has to consider accuracy and truth with a view to exact reproduction – rather than the making of pictures. Any sketch made down here should ~~carry~~ be a ~~truthful~~ true record of what happened or of what things looked like.[300]

Again, taking note of Wilson's own alterations to his text we can see that 'should carry a truthful' has been amended to 'should be a true' record. Yet in his criterion of a 'pure copyist with an artistic sense' contrasting qualities are combined that are difficult to reconcile. In the previous two quotes I note that the definition is unstable, lurching from the demand that the work demonstrate the objective truth comparable to photographic accuracy while also requiring that it have the qualities of a 'picture' that align it with subjective choice, the arrangement of composition, and the generation of affect or atmosphere.

The second mitigating fact that Wilson said must be noted regarding Ruskin's advice was that the climate limited the artist's choice of drawing material and specifically to the expediency of pencil sketching:

> and in the second place that as the use of water colours, oils, pen and ink and even coloured chalks are impracticable out of doors down here, one's work direct from nature can only be done in pencil, and pencil is an easy thing with which to get results in quickly.[301]

Even pencil lead is challenged by the cold:

> The cold has a funny effect on pencil lead, the softest B is hard and gritty as

299 Wilson, 'Notes for a Lecture', MS 1225/3.

300 Wilson, 'Notes for a Lecture', MS 1225/3.

301 Wilson, 'Notes for a Lecture', MS 1225/3.

> an H and makes the same sort of mark. You can't get any soft black mark with it out of doors.[302]

But the most striking difference caused by climate is noted as follows:

> As regards colour one can do nothing out of doors.[303]

The faithful copyist working direct from nature is dependent on pencil sketches, supplemented with annotation and note-taking. It could be argued that these two modifying facts concerning first, descriptive observation and second, climate, were relevant to more than the efforts to sketch but also extended to many other aspects of their circumstances in Antarctica. The open-air immediacy of working in watercolour was a practical impossibility and as for colour, there was nothing possible in the open air.

302 Wilson cited in David M. Wilson and C. J. Wilson, *Edward Wilson's Antarctic Notebooks*, p. 43.

303 Wilson, 'Notes for a Lecture', MS 1225/3.

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Fig 2.5

The Weather *Twenty-first-century Storm-Cloud*

Through Turner[304] as exemplar, Ruskin's treatise in *Modern Painters*[305] first published in 1843, explores how observational truth is to be achieved.[306] In this book under the section 'The Truth of Skies',[307] we see that for Ruskin it was not just a question of painting *in* the open air but also a question of how to paint a true and beautiful representation *of* the open air. To this end Ruskin's choice of language often exploits scientific vocabulary:

> Let us begin then with the simple open blue of the sky. This is of course the colour of the pure atmospheric air, not the aqueous vapour, but the pure azote and oxygen, and it is the total colour of the whole mass of the air between us and the void of space.[308]

The 'simple open blue' is qualified by scientific terminology, including 'azote', a word now obsolete, which was the former term for nitrogen, meaning that in the air which is the gaseous complement to oxygen, not capable of supporting life. Wilson seems to have believed (as did Ruskin) that being correctly informed of the science of what was in front of one would facilitate the faculty of correct or well-regulated observation.[309]

Wilson frequently referred directly to Turner but his appreciation of Turner was, in part, filtered through Ruskin. Like Wilson's own note-making and the sketches he made in the open air of Antarctica, Ruskin's writing on Turner can be thought of as another kind of annotation of the original. Under Ruskin's enthusiastic pen the art of Turner, whom he referred to as 'our great master', was transposed into literature:

> And if you look intensely at the pure blue of a serene sky, you will see that there

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304 In *Modern Painters,* Turner is the model, as stated in the original subtitle; this was subsequently omitted in later editions. John Ruskin, 1843, *Modern Painters: Their Superiority in the Art of Landscape Painting to all the Ancient Masters, proved by the examples of the True, the Beautiful, and the Intellectual, from the works of Modern Artists, especially form those of J.M.W.Turner, Esq. R. A.* (London: Smith, Elder and Co., 1843).

305 John Ruskin, *Modern Painters* Vols I–V, 5th edn.

306 Seaver says of Wilson that, on achieving a First Class in his exam at Cambridge University, 'The Prize he chose was five volumes of Ruskin bound in blue calf'. Seaver, *Edward Wilson of the Antarctic*, p. 22.

307 John Ruskin, 'The Truth of Skies', in *Modern Painters* Vol. I, 5th edn.

308 Ruskin, '*The Truth of Skies*', p. 206.

309 Wilson, 'Notes for a Lecture', MS 1225/3.

> is a variety and fullness in its very repose. It is not flat dead colour, but a deep, quivering, transparent body of penetrable air, in which you trace or imagine short, falling spots of deceiving light, and dim shades, faint, veiled vestiges of dark vapour; and it is this trembling transparency which our great master has especially aimed at and given. His blue is never laid on in smooth coats, but in breaking, mingling, melting hues, a quarter of an inch of which, cut off from all the rest of the picture, is still *spacious*, still infinite and immeasurable in depth. It is a painting of the air, something into which you can see, through the parts which are near you into those which are far off; something which has no surface, and through which we can plunge far and farther and with out stay or end, into the profundity of space.[310]

This paragraph exemplifies the poetic turn of phrase that Ruskin employed in his *ekphrasis* of Turner's painting, transposing on one level a visual experience into a verbal one, and through that verbal description accounting for another type of transposition, this time from an initial open-air perceptual observation into a satisfactory correlate in painting.

Ruskin gave two lectures at the London Institution on 4th and 11th February 1884, titled *The Storm-Cloud of the Nineteenth Century*,311 by which time *Modern Painters* was coming up to its fifth edition. In this lecture Ruskin blamed the rapid industrialisation of Europe and the massive increase in the burning of coal for changes in the observable weather. In the second lecture he reflected that his earlier writings in *Modern Painters* would not have been possible under the contemporary conditions that he was now describing. He wrote:

> Had the weather when I was young been such as it is now, no book such as *Modern Painters* ever would or *could* have been written.[312]

He gives as evidence diary entries of 'patient and […] accurately recorded observations of the sky, during fifty years'.[313] Ruskin writes in the preface of the press receiving his assertion of 'radical change, during recent years, in weather aspect'[314] with charges of insanity or fancifulness. What Ruskin was expressing was a concern for a changing climate. This change in climate, Ruskin asserts,

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310 Ruskin, '*The Truth of Skies*', pp. 207–08.

311 John Ruskin, *The Storm Cloud of the Nineteenth Century: Two Lectures* (Orpington, Kent: G. Allen, 1884), p. 137.

312 Ruskin, *The Storm Cloud of the Nineteenth Century*, p. 137.

313 Ruskin, *The Storm Cloud of the Nineteenth Century*, preface, p. iv.

314 Ruskin, *The Storm Cloud of the Nineteenth Century*, preface, p. iv.

would have made *Modern Painters* un-writable, which must mean also that any new reading of *Modern Painters* should be sensitive to the changing climates in which the book is read.

Fig 2.6

Climate Control *Dome Museum*

Climate is the word for the set of parameters pertaining to the meteorological measurements of such things as temperature, humidity, wind, rain, snow fall, air pressure and cloud cover over a period of time, which is notably longer than that accorded to similar variables that make up the weather. Human life has been remarkably effective in the range of environments and climates that it has succeeded in inhabiting. But the range of climate conducive to human life and activity does have its limits. So too, does the range of climates conducive to *en plein air* watercolour practice, as well as those conducive to the conservation of the resultant watercolour artefacts. As much as watercolour might be an effective medium for an artist to use for responding to the weather and for making images of the natural climate, the outcomes of works on paper have little tolerance for climatic variation: watercolour works are especially sensitive to the condition of the climate both in which they are produced and kept.

Ruskin's techniques for preserving watercolours were applied to Wilson's watercolours in the Scott Polar Research Institute in 1952. The Twenty-Sixth Annual Report of the Scott Polar Research Institute recorded the efforts of the Museums and Special collections section of the operation, and the practical endeavour of preservation of the watercolours listed in the inventory as '16 cabinets for storage of pictures':

> The preservation of E. A. Wilson's original Antarctic watercolours and sketches has been greatly aided by the generous gift of a set of mahogany cabinets by the National Gallery. These cabinets were designed by Ruskin and originally intended for Turner's watercolours.[315]

These sixteen cabinets were some of the four hundred that were designed by Ruskin after Turner's death in 1851 on his carrying out of the Turner bequest for the National Gallery (Fig 2.6). Ruskin's design put into effect some of the ideas he had about the preservation of works on paper. The description of the cabinets would be very similar to the description of the cabinets used to hold

315 SPRI, 'Twenty-Sixth Annual Report of the Committee of Management of the Scott Polar Research Institute' (17 October 1952), p. 64. Also published as Scott Polar Research Institute, 'Twenty-Sixth Annual Report of the Committee of Management of the Scott Polar Research Institute, 17 October 1952' Polar Record, **6**, 46 (July 1953), pp. 879–86 <DOI: http://dx.doi.org/10.1017/S0032470700048713>(published online 27 october 2009) [20 JULY 2010].

Ruskin's teaching collection, which was housed in 'polished mahogany'. [316]

> The objects were mounted in window mounts (usually held in place with sealing wax or stamp edges), then placed in a glazed frame, and each frame was then positioned in its own slot in the cabinet. This kept the collection in order (each frame was carefully labelled with its allotted number), as well as protecting the objects from the depredations of light and atmospheric pollution.[317]

I wondered how Wilson would have felt to find his works housed in the display cabinets meant for the presentation of his hero's legacy. Did he even, perhaps, encounter Turner's work in these cabinets when he went to copy from the Turner drawings and watercolours while he was living in London?[318] These cabinets, as reported by the archivist at Scott Polar Research Institute, are now inaccessible and unused in the old gallery room, which has now become a store. The Wilson watercolours are now conserved in line with more modern standards, in acid-free boxes at temperature-controlled levels or stacked in their frames.[319]

Tim Padfield's research into the physics of conservation has proposed that international standards are not the most effective way of addressing diverse requirements; different artefacts might require quite different temperatures and relative humidities in order to maximise the duration and stability of their preservation: the notion of a global standard of 50% relative humidity at 20 degrees centigrade will be less than effective for some items, he argues:

> The old orthodoxy that there is a universal specification for the ideal museum climate is fading against evidence that very different climates preserve some artifacts better and that the energy used to maintain year round constancy of climate is a serious drain on museum finances and a burden on the consciences of the museum leaders, in view of dire warnings of global catastrophe through unrestrained release of carbon dioxide into the atmosphere.[320]

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316 Sara Atwood, *Ruskin's Educational Ideals* (England: Ashgate, 2011), p. 62.

317 Jonathan Miller, *The Ruskin Project: Digitising Ruskin's Teaching Collection at the Ashmolean,* ICHIM, Paris, [8–12 September 2003]<www.archimuse.com/publishing/ichim03/081C.pdf > [3 August 2015], p. 7.

318 Seaver describes Wilson's frequent visits to the National Gallery to look at Turner's drawings and paintings. Seaver, *Edward Wilson of the Antarctic*, p. 32.

319 Personal conversation with Naomi Boneham, the archivist at SPRI, 12 July 2012.

320 Tim Padfield, 'Museum Environmental Standards in an Age of Energy Anxiety', in proceedings of *Sharing Conservation Decisions 2013*, National Museum of Wales, 2013 <http://www.conservationphysics.org/standards/mus-env-std.pdf> [2 August 2015], p. 2.

The smaller institution's solution might be to employ an adequate modulation of 'radiator and openable window'[321] to deal with the environmental changes. In situations in which the artefacts are to be viewed, a climate congenial to human presence is necessary. Other buildings can also provide the long-term cold storage of items that are accessed only very occasionally.

The extreme climate of Antarctica and the specialised controlled climate of the archive have in common the challenges they pose to the to provision of climate control: one for the benefit of preserving documents, the other for the support of human habitation and life. Making watercolour paintings in sub-zero conditions and making watercolours in the archive are both activities restricted by climate: Antarctica excludes the use of watercolour owing to the freezing temperatures that transform the fluid medium to solid ice, and the harsh weather makes painting in the open air physically impossible for any length of time; archives exclude the use of watercolour owing to an institutional prohibition made in order to preserve the vulnerable artefacts in an air-conditioned atmosphere of controlled temperature and humidity.

The climate control in the archive is necessary to maximise longevity of the artefacts so it can be a little chilly for researchers, as the viewing rooms are kept on the cool side. Photocopied instructions recommend one 'to bring a jumper'. My aesthetic intention is to make a copy of the watercolour as a first stage of my ekphrasis of Antarctica through the archive of Wilson's watercolours. But on my visits to the archive, when I wish to copy Wilson's work I find that watercolour becomes impossible in these environments too, but for very different reasons. I can hold the original work in my hands, but my direct contact with these artefacts in the climate-controlled space cannot provide the opportunity to make copies in watercolour. I too am reduced to pencil only, as the use of watercolour is not permitted in the archive. I find that what I set out to copy, that is, Wilson's watercolour, in my watercolour painting, is not what I actually find myself copying. What I find myself copying is the attempt to paint under the limitations of climate control. Wilson's attempt to make watercolours in the open air in Antarctica is transposed into my attempt to make watercolours of his works in the archive. In this example climate

321 Padfield, 'Museum Environmental Standards in an Age of Energy Anxiety', p. 6.

control is the axis around which the transposition turns. As it is with Wilson in the open air of Antarctica, so it is with me in the archive: note-taking must mediate. So, with an extra layer of clothing on, I make pencil sketches of Wilson's paintings, and in a repetition of his method, but for purely practical reasons, I find myself, like Wilson, adding colour annotations (Figs 2.7 & 2.8).

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Fig 2.7

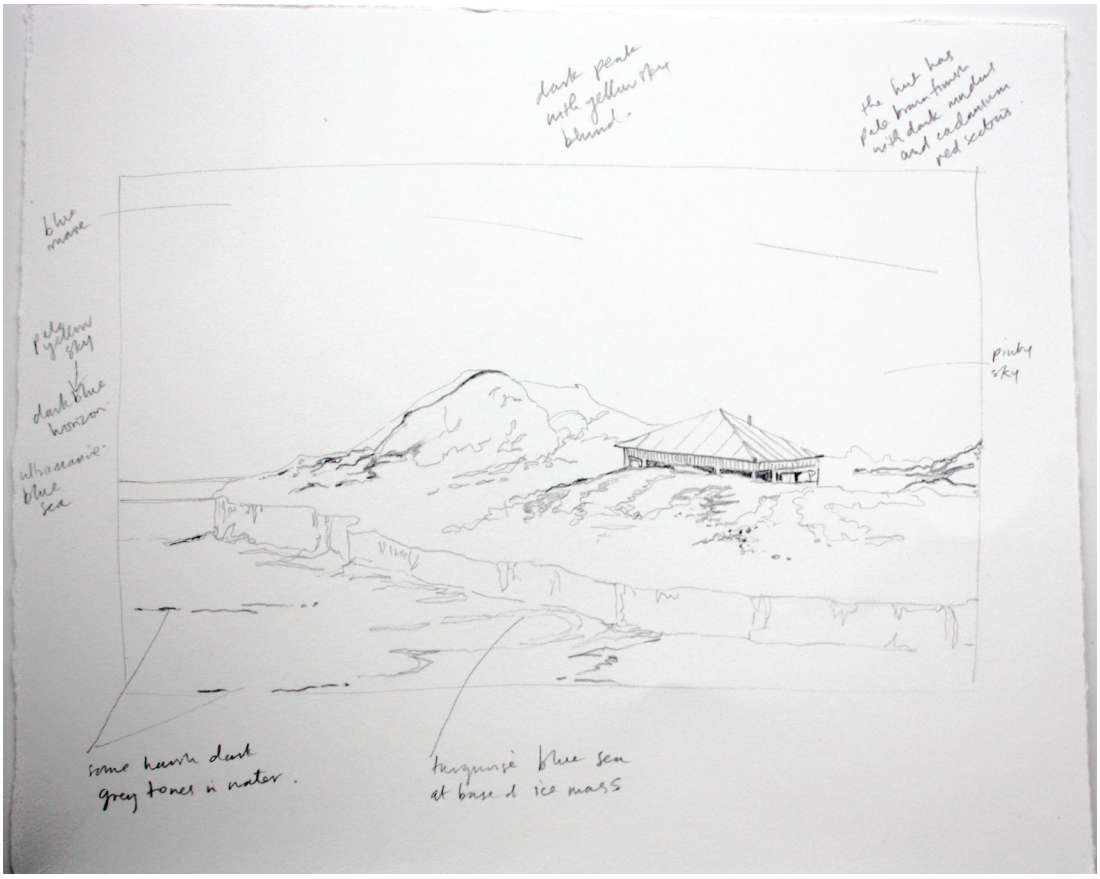

dark peaks with yellow sky behind.
the hut has pale brown roof with dark umber and cadmium red accents
blue mauve
pale yellow grey
dark blue horizon
ultramarine blue sea
pinky sky
some brown dust grey tones in water.
turquoise blue sea at base of ice mass

Fig 2.8

Fig 2.9

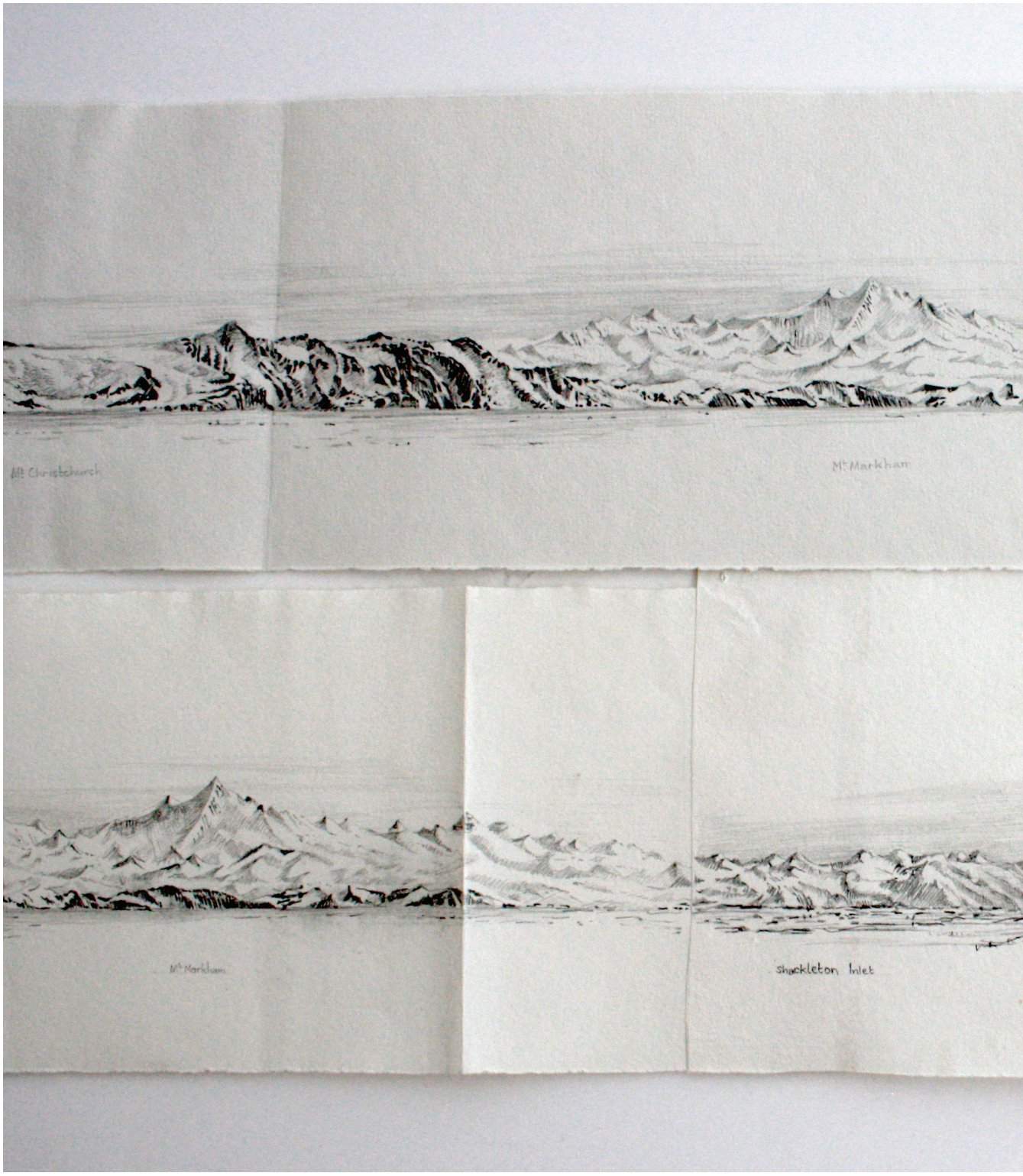
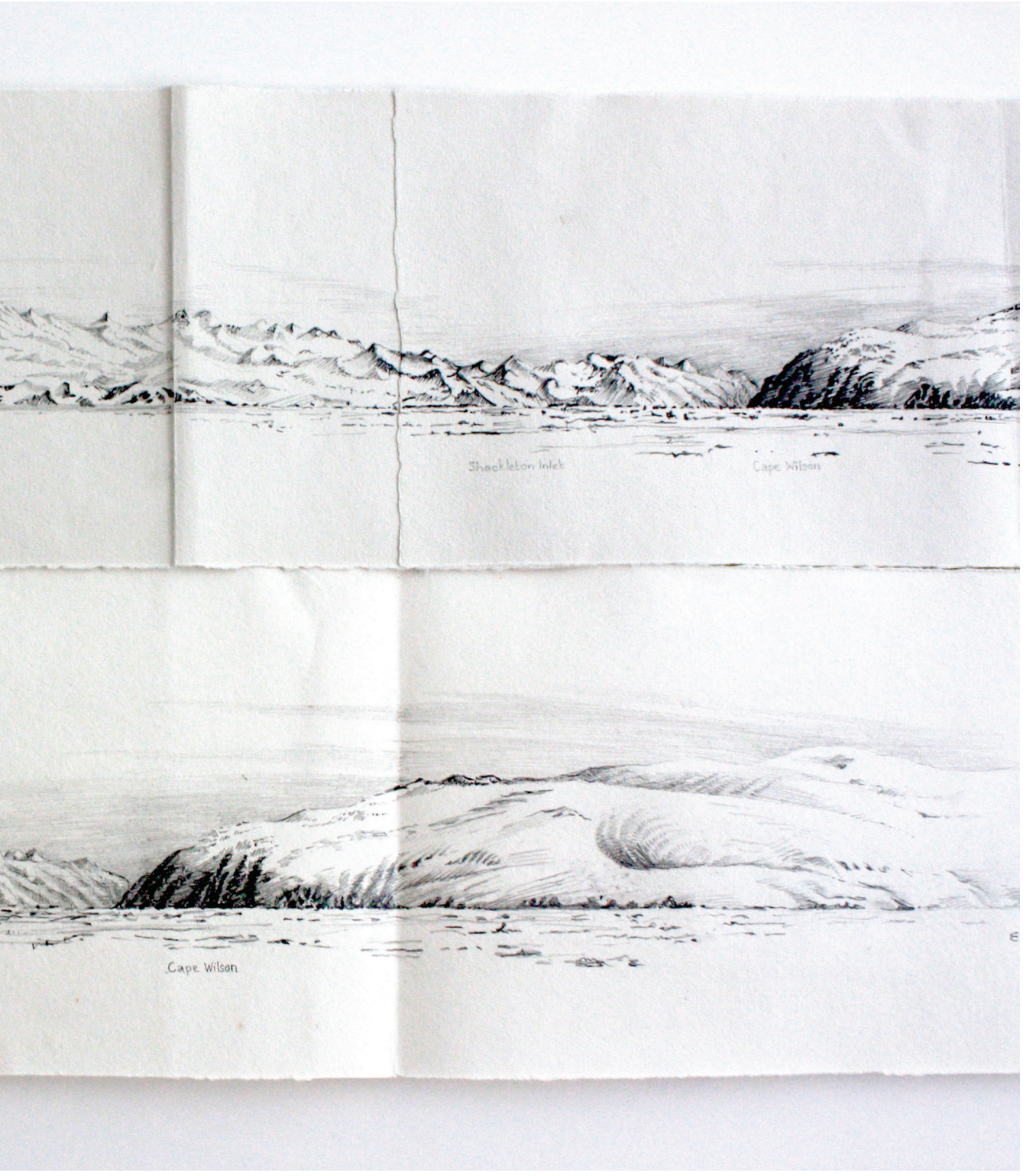


Fig 2.10


Shackleton Inlet
Cape Wilson
Cape Wilson

Horizon (false horizon) 2013 *Lantern Landscape 2013*

> Wed 26 Feb 1902 – I spent the whole morning and afternoon piecing together my sketches of the coast to make continuous panoramic views. There is very little of the whole coast line of South Victoria Land that I haven't got on paper.[322]

The panoramas that Wilson drew during the *Discovery* expedition 1901–1904 were reproduced as lithographic prints in the *National Antarctic Expedition 1901–1904 Album of Photographs and Sketches with a Portfolio of Panoramic Views*.[323] After Wilson's return from his first expedition to Antarctica from 1901–1904 he was much involved in editing and assembling the Royal Society publication that resulted. The library copy of this is for reference only. The book comes in two volumes. It is quite substantial, the page size being bigger than A3. The associated portfolio has a couple of fold-out maps and a whole set of long, thin panoramas, no more than fifteen centimetres high: the shortest as long as a desk in the library, the longest as wide as four desks. I seek out the less popular areas in the library, knowing that the single desk will not accommodate the viewing of the panoramas. I take a seat between fellow readers.

The Secretary of the Royal Society Sir Archibald Geike, introduced the publication with special acknowledgment of Wilson's contribution:

> The various pencil sketches, which convey so vivid and artistic an impression of Antarctic scenery, are the work of the Junior Surgeon of the Expedition, Mr Edward A. Wilson, M.B. The Committee was fortunately able to obtain his services for the laborious task of arranging the whole of the selected material, fixing on the maps a precise locality of each photograph and sketch and writing the descriptive letterpress throughout the volume.[324]

In the following pages it is a pleasure to hear the cadence of Wilson's modest and precise tone in his written introduction. With a nearly uncanny prescience, he speaks to the future, judging that 'greater value' be attached to:

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322 Edward Wilson, *Diary of the 'Discovery' Expedition to the Antarctic Regions 1901–1904*, ed. by Ann Savours. (London: Blandford Press, 1966), p. 119.

323 Edward Wilson, *National Antarctic Expedition 1901–1904 Album of Photographs and Sketches with a Portfolio of Panoramic Views*, with a prefatory note by Archibald Geike (London: The Royal Society, 1908).

324 Sir Archibald Geike in Wilson, *National Antarctic Expedition 1901–1904 Album of Photographs and Sketches with a Portfolio of Panoramic Views*, pp. vii–viii.

> the pictures which represent ice conditions of to-day with sufficient exactness for comparison with similar pictures which may be taken in years to come. It is evident that the recession of ice in the Antarctic region, one of the more interesting facts which have recently come to light, may be watched from one generation to another by such means as are here suggested and supplied.[325]

I am interested to read the details of the practical printing processes that have been chosen to reproduce the original glass-plate photographs and pencil drawings into a form for this publication. The paper stock chosen, as described by the Secretary of the Royal Society, Sir Archibald Geike, compromised brilliancy for the sake of endurance and longevity:

> The pure rag paper used for the half-tone reproductions was specially chosen and made with the view to durability, in preference to so-called 'Art-papers', which, though they would undoubtedly have given more brilliant impressions, could not have been regarded as permanent. The photogravures and pencil sketches also have been printed on pure rag paper which will last.[326]

A clear pride in the specifics and quality of the methods applied and an interest in innovation can be discerned:

> the pencil drawings have been reproduced by a new photo-lithographic process, under the supervision of its inventor, Mr Donald Cameron-Swan.[327]

It appears that Donald Cameron-Swan (1863–1951) was an innovator of some repute in the world of image reproduction. He was the son of Sir Joseph Swan, who had founded the Swan Engraving Company, later Swan Electrical Engraving Company, developing photographic reproduction broadly known as 'process' printing. A contemporary publication, *The Chemistry of Light and Photography in the Application to Art, Science, and Industry* first published in 1875 and in this fourth edition in 1883, identified the special suitability of this process for topography:

> In one branch photo-lithography surpasses all other reproducing arts; that is, in producing copies of maps which have been drawn by hand. The preparation of geographical maps requires much time and care. The outlines of mountains, rivers, and countries must be executed with the greatest exactitude, corresponding to the measurement. Frequently draughtsmen and engravers

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325 Wilson, *National Antarctic Expedition 1901–1904 Album of Photographs and Sketches with a Portfolio of Panoramic Views*, introduction. p. ix.

326 Sir Archibald Geike in Wilson, *National Antarctic Expedition 1901–1904 Album of Photographs and Sketches with a Portfolio of Panoramic Views*, introduction. p. viii

327 Wilson, *National Antarctic Expedition 1901–1904 Album of Photographs and Sketches with a Portfolio of Panoramic Views*, introduction. p. viii.

> are employed for the various details, and though working conscientiously, inaccuracies are unavoidable, and make corrections necessary. All this takes time and trouble.[328]

The comments on the importance of accuracy when dealing with the 'outlines of mountains' seem to contain an appreciation of the gravity of the task. It seems that territorial topography is not something to be trifled with. There is likely to be too much at stake. Accuracy at each stage of its reproduction was of paramount importance.

Gerry Beegan, writing on the photo-lithographic process developed by the Swan Engraving Company, describes the advantages as follows:

> Reproduction by process was both quicker and less expensive than wood engraving. Moreover, by removing the interpretive hand of the engraver the photographic processes appeared to be direct conduits for the artist's individual vision.[329]

This was in contrast to the outmoded skill of the engraver:

> Not only did the engraved line suggest more time taken to produce the image, it branded the reproduction as a translation. Process, on the other hand, managed to conceal its production and appeared to be a facsimile rather than an interpretation.[330]

In the case of his drawings, artistic self-expression was not what Wilson was after, but rather precision and truth to the scene before him, and indeed, he seemed to have achieved great accuracy:

> His panorama of the Transantarctic Mountains from Cape Adare to Ross Island ran longer than 100 feet when pieced together. When Scott took angle measurements to check the paintings against the survey work, he was astounded at how accurate the drawings were.[331]

Wilson would have certainly appreciated the way in which the new photolithography might preserve the accuracy of his drawings in their reproduction.

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328 Hermann Vogel, *The Chemistry of Light and Photography in Their Application to Art, Science, and Industry* (Cambridge University Press, 2011) First published in 1875, p. 245.

329 Gerry Beegan, '1890s People, Joseph Swan' *The Yellow Nineties Online* , 2010 <http://www.1890s.ca/People.aspx?l=S&n=Swan&n1=Joseph> 'Sir Joseph Swan (1828–1914)' para. 2., <www.1890s.ca/PDFs/swan_bio.pdf> [3 August 2015].

330 Gerry Beegan, *The Mass Image: A Social History of Photomechanical Reproduction in Victorian London*. (Hampshire; New York: Palgrave Macmillan, 2008), p. 187.

331 William L. Fox, 'Terra Antarctica: A History of Cognition and Landscape', *Archives of Natural History,* **32** (2005), 15, p. 195.

The *National Antarctic Expedition 1901–1904* panoramas consist of paper folded down like a concertina into dimensions of paper 28 cm long by 15 cm high to fit into the accompanying box. As I unfold the panoramas in the library, I notice, included in these panoramas of coastlines, the topographical feature to which Wilson has given his name, like a little self-portrait in black and white: Cape Wilson (Fig 2.9).[332] I discover that each continuous panorama has been cut, glued or folded according to the necessity of the various dimensions in the process of its production. Firstly, the folds do not coincide with the previously cut edge of the paper. Those cuts that marked the printed panoramas had been previously determined according to the dimension of the paper on which the panoramas had been printed. And those printed sections of panoramas had been previously processed from photolithography plates derived from Wilson's re-drawn pencil panoramas. Wilson had copied these redrawn panoramas from the much smaller pages of his sketchbook in which he had made his initial drawings out in the field. Whilst he was sketching out in the open air, each turn of the page had enacted another kind of 'cut' upon the view. I decide to cut my strips of paper into the same dimensions as the printed panoramas. This means that they are 15 cm high, but I cut the length to match the particular panorama that I am about to copy. I also cut and tape them together in the same places that each different individual printed version has been cut and taped. So before I even start to draw, the paper has been cut and taped together so as to closely resemble the printed panoramas.

Horizon (false horizon) 2013 comprises hand-drawn copies of Wilson's panoramas along with colour circles of watercolour (Fig 2.10). My pencil copies of the panoramas are seen alongside these watercolour circles of colour that stand for interpretations of Wilson's colour annotations found in his original field sketches.

The 'horizon' in the title *Horizon (false horizon)* can mean both a boundary of the earth's surface visible from a particular point, and the extent of a person's mental outlook. Both are crucial for making accurate orientations. The 'false horizon' in the title refers to the name of the explorer's navigational tool; this is

332 Wilson is commemorated in three locations: Cape Wilson 82º 14'S, 37º 10'W; Wilson Hills 69º 40'S, 158º 30'E and the Wilson Piedmont Glacier 77º 15'S, 163º 10'E. <https://www.nzaht.org/AHT/MeettheCrewEvans/ >[10 Sep 2014].

a small reservoir of reflective liquid, such as mercury, which, in the absence of a visible horizon, can be used with a sextant to identify location. It can be found recommended as part of the kit useful to amateur geographers in the *Hints to Travellers* of the Royal Geographical Society:[333]

> *Mercurial Horizon* – Altitudes taken by its means are thoroughly reliable only when reflections have been observed from the uncovered mercury; for it is difficult to procure glass, large enough for the cover, which does not sensibly distort the reflections.[334]

For the outdoor sketcher in Antarctica, the risk of freezing fingers makes speed necessary. In contrast, my time in the library re-drawing these views is pretty slow. It is measured in inches per hour. Days pass in copying the coastline, and further days in cross-referencing to the notebooks in the Scott Polar Research Institute. But while copying one panorama my rhythm gets pulled up short. Have I lost concentration and repeated myself? I discover two inches of the same coastline repeated in the printed panorama. I feel like shouting out –'There's a mistake'. I see it as I copy the pencil mark line for line. I wonder how much actual land these two inches equate to. It erupts between *Mount Wharton* and *Cape Douglas*. The *Cape Douglas* section is doubled, and repeats (Fig 2.11). There is no doubt that it is the same drawing printed twice, rather than a drawing of very similar topographic horizon line. I verify this by checking the millimetre pencil marks that constitute its topography. The accuracy of photolithography for map reproduction has not helped to avoid this mistake. It must have happened back in London at the Swan Electric Engraving Company in the room where the printed pieces were matched up. It probably happened quickly, the mistake of a nameless person in the process. It is not Wilson's fault. Did he ever notice, I wonder? He would have been mortified.

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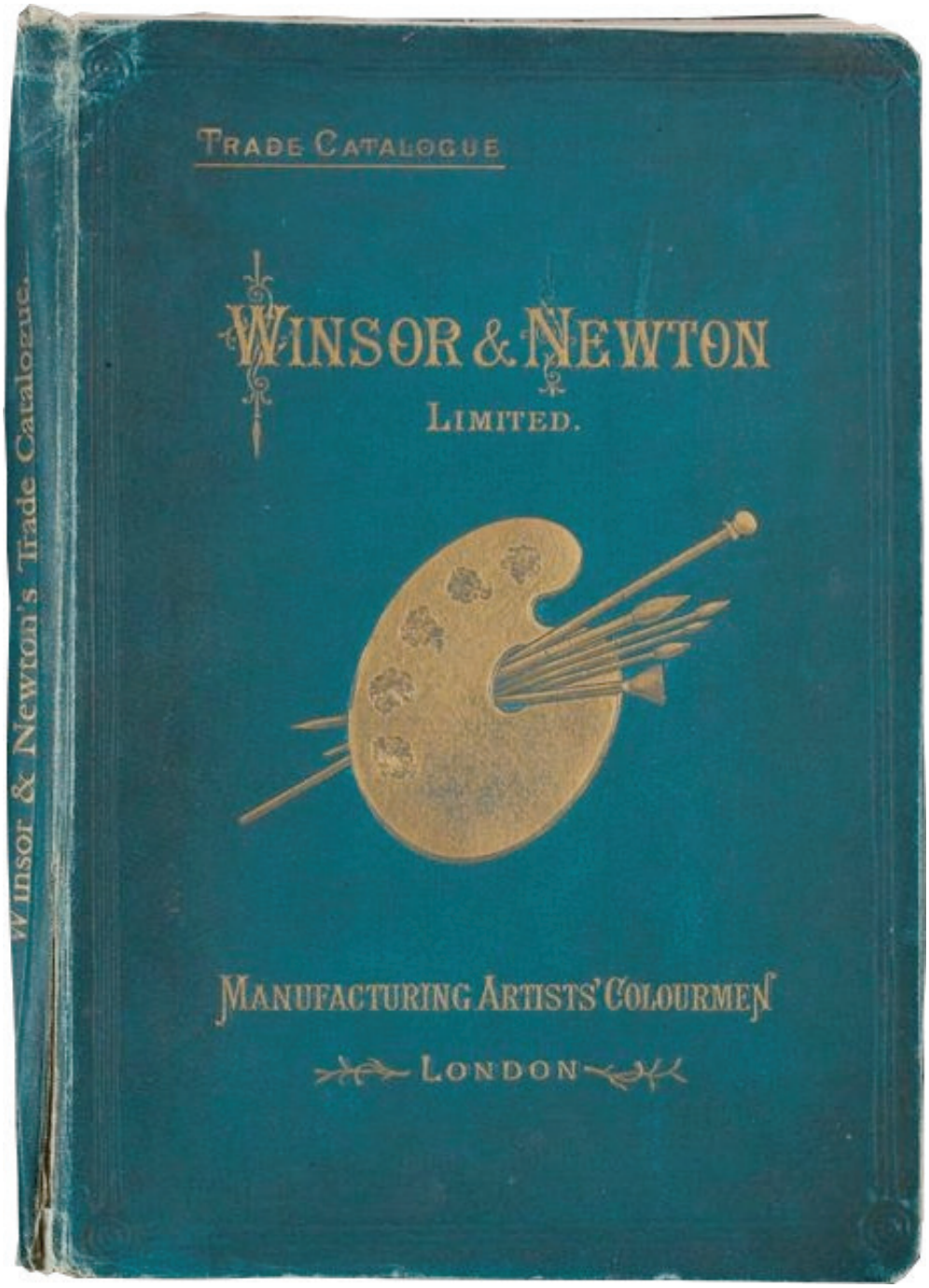
333 See in this thesis the section 'Hints to Travellers' in Chapter One, in which more detail is given on the history and purpose of these publications.

334 *Hints to Travellers*, 4th edn, ed. by Francis Galton (London: The Royal Geographical Society, 1878), p. 19.

Fig 2.11


Winsor & Newton's Trade Catalogue.
TRADE CATALOGUE
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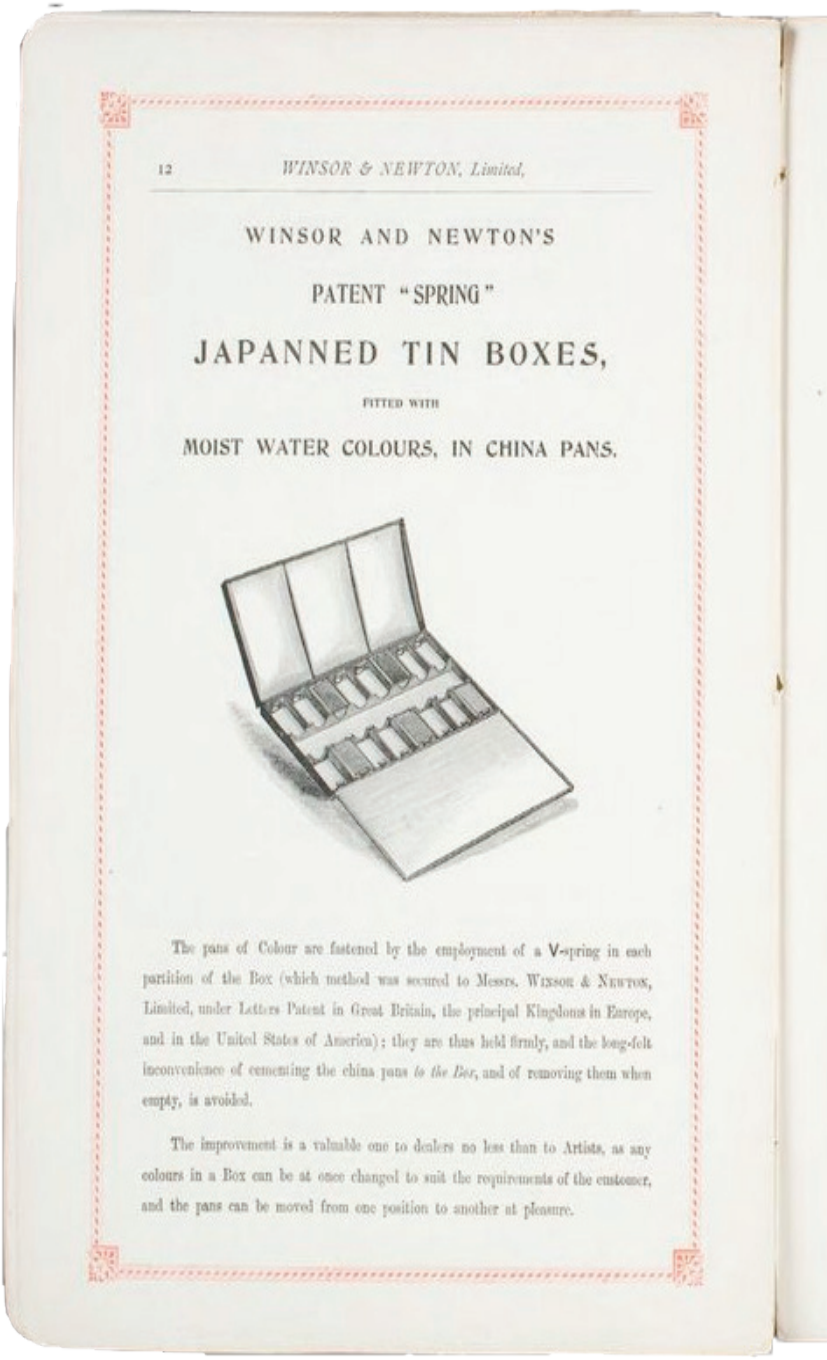
LIMITED.
MANUFACTURING ARTISTS' COLOURMEN
LONDON

Fig 2.12



12 *WINSOR & NEWTON, Limited,*

WINSOR AND NEWTON'S

PATENT "SPRING"

JAPANNED TIN BOXES,

FITTED WITH

MOIST WATER COLOURS, IN CHINA PANS.

The pans of Colour are fastened by the employment of a V-spring in each partition of the Box (which method was secured to Messrs. Winsor & Newton, Limited, under Letters Patent in Great Britain, the principal Kingdoms in Europe, and in the United States of America); they are thus held firmly, and the long-felt inconvenience of cementing the china pans *to the Box*, and of removing them when empty, is avoided.

The improvement is a valuable one to dealers no less than to Artists, as any colours in a Box can be at once changed to suit the requirements of the customer, and the pans can be moved from one position to another at pleasure.

Fig 2.13

WINSOR AND NEWTON'S

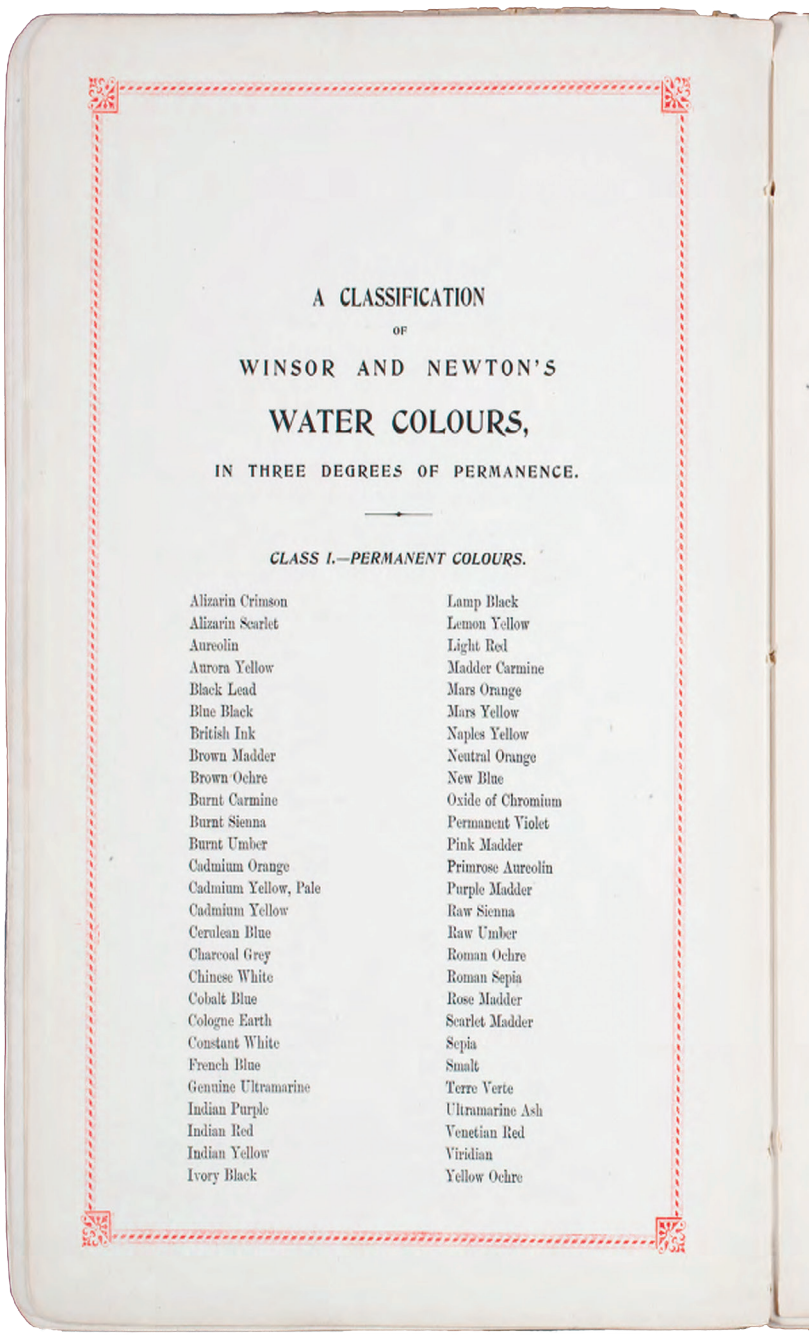
PATENT "SPRING"

JAPANNED TIN BOXES,

FITTED WITH

MOIST WATER COLOURS, IN WHOLE PANS.

Retail. Each. s. d.		Trade. Each. s. d.
	3 Whole Pan Box, containing	
6 6	Chinese White, New Blue and Sepia	4 0
	4 Whole Pan Box, containing	
8 3	Raw Sienna, Light Red, Cobalt and Vandyke Brown ...	5 0
	6 Whole Pan Box, containing	
10 3	Gamboge, Raw Sienna, Light Red, Crimson Lake (½), Alizarin Crimson (½), Prussian Blue and Vandyke Brown	6 0
	8 Whole Pan Box, containing	
13 6	Gamboge, Raw Sienna, Burnt Sienna, Light Red, Crimson Lake (½), Alizarin Crimson (½), Cobalt, Prussian Blue and Vandyke Brown	8 0
	10 Whole Pan Box, containing	
16 0	Gamboge, Yellow Ochre, Raw Sienna, Burnt Sienna, Light Red, Crimson Lake (½), Alizarin Crimson (½), Cobalt, Prussian Blue, Vandyke Brown and Brown Pink ...	9 6
	12 Whole Pan Box, containing	
18 6	Gamboge, Yellow Ochre, Raw Sienna, Burnt Sienna, Light Red, Vermilion (½), Indian Red (½), Crimson Lake (½), Alizarin Crimson (½), Cobalt, Prussian Blue, Payne's Gray, Vandyke Brown and Brown Pink	11 0



A CLASSIFICATION

OF

WINSOR AND NEWTON'S

WATER COLOURS,

IN THREE DEGREES OF PERMANENCE.

CLASS I.—PERMANENT COLOURS.

Alizarin Crimson
Alizarin Scarlet
Aureolin
Aurora Yellow
Black Lead
Blue Black
British Ink
Brown Madder
Brown Ochre
Burnt Carmine
Burnt Sienna
Burnt Umber
Cadmium Orange
Cadmium Yellow, Pale
Cadmium Yellow
Cerulean Blue
Charcoal Grey
Chinese White
Cobalt Blue
Cologne Earth
Constant White
French Blue
Genuine Ultramarine
Indian Purple
Indian Red
Indian Yellow
Ivory Black
Lamp Black
Lemon Yellow
Light Red
Madder Carmine
Mars Orange
Mars Yellow
Naples Yellow
Neutral Orange
New Blue
Oxide of Chromium
Permanent Violet
Pink Madder
Primrose Aureolin
Purple Madder
Raw Sienna
Raw Umber
Roman Ochre
Roman Sepia
Rose Madder
Scarlet Madder
Sepia
Smalt
Terre Verte
Ultramarine Ash
Venetian Red
Viridian
Yellow Ochre

Fig 2.14

CLASS II.—MODERATELY PERMANENT COLOURS.

Antwerp Blue
Bistre
Bronze
Brown Pink
Chrome Deep*
Chrome Lemon*
Chrome Orange*
Chrome Yellow*
Emerald Green
Field's Orange Vermilion
Leitch's Blue
Orange Vermilion
Prussian Blue
Rubens' Madder
Rose Dorée
Scarlet Vermilion
Vandyke Brown
Vermilion

CLASS III.—FUGITIVE COLOURS.

Carmine
Carmine Lake
Crimson Lake
Dragons' Blood‡
Flake White†
Gamboge
Hooker's Green, No. 1‡
Hooker's Green, No. 2‡
Indigo
Intense Blue
Italian Pink
Kings' Yellow
Neutral Tint‡
Olive Green‡
Payne's Gray‡
Prussian Green‡
Pure Scarlet
Purple Lake
Rose Lake
Sap Green
Scarlet Lake‡
Violet Carmine
Warm Sepia‡
Yellow Carmine
Yellow Lake

* These offer a good resistance to the combined action of light, oxygen, and moisture, but are liable to darken under the influence of sulphuretted hydrogen.

† Stands light, oxygen, and moisture well, but goes black in time, being extremely sensitive to the action of sulphuretted hydrogen.

‡ These mixed colours do not fade right out, but only fade in respect of their fugitive constituents. Inasmuch, however, as the strength of a chain is only that of its weakest link, we have been compelled to class them with the fugitive colours.

Permanent Colour *Fugitive Colour*

On show as part of the Wilson display at the Cheltenham Art Gallery and Museum in 2010, were, amongst other things, a few of Wilson's art materials. This included a bottle of Process Black. The text reads:

> Process Black (Noir a Reproduction, Prozess Schwarz.) PREPARED EXPRESSLY FOR USE IN DRAWINGS INTENDED FOR PROCESS-REPRODUCTION. Dilute with water for half-tones. For high-lights use WINSOR AND NEWTON'S liquid Albanine. WINSOR & NEWTON, Ltd., Rathbone Place, London, England.

Process Black was used in the production of drawings intended for the kind of lithographic process printing used in *National Antarctic Expedition 1901–1904 Album of Photographs and Sketches with a Portfolio of Panoramic Views*. [335] There was, also, a small box of watercolour fixative, also manufactured by Winsor & Newton. Winsor & Newton sponsored the expeditions by supplying art materials, and in so doing they were able to lay claim to their product's stability in diverse conditions and its reach across divergent latitudes. Wilson wrote a letter describing the durability of the Winsor & Newton brand of pigments a few weeks before he set off on the journey to the Pole. This letter turned up in the trade catalogues of Winsor & Newton as an endorsement of their product's virtues in the extremes of climate and conditions. Dated as 29 October 1911 it was reprinted and stuck on to the pages of the Winsor & Newton Ltd 1914 illustrated trade catalogue opposite the relevant product. In this letter Wilson extols the 'remarkable stability' of the Winsor & Newton watercolour and paper under the extreme cold of Antarctica.[336]

Winsor & Newton had wanted these products to be associated with the qualities of endurance and global reach that the explorers of the Antarctic Expedition represented. This association would have been of especial appeal to these manufacturers of pigments, considering their recent history. In the late nineteenth century the colourmen,[337] manufacturers of artist materials of

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335 Wilson, *National Antarctic Expedition 1901–1904 Album of Photographs and Sketches with a Portfolio of Panoramic Views*.

336 Winsor & Newton Trade Catalogue, (London, 1914)

337 Colourmen is a word, now slightly antiquated but current in the nineteenth century, meaning traders in paint.

Victorian Britain, had found themselves at the centre of a controversy about the stability of their pigments. Winsor & Newton had been established in 1832 by the chemist William Winsor and artist Henry Newton[338] and in 1892 they 'were the first to publish the composition and permanence of their colours' (Figs 2.12 & 2.13).[339] Secrecy around the recipes and content of the paints had been a necessary business precaution, but public concern, or even indignation, had been so great that Winsor & Newton had needed to use the pages of their 1896 product catalogue to mount a further defence of their products and practices:

> Two criticisms are often levelled by thoughtless people at the heads of Artists' Colourmen, and of these we have decided, as one of the leading English firms, to take some practical notice. It is alleged:- i. That Artists' Colourmen are in the habit of selling colours which are not permanent; and ii. That they keep Artists in ignorance of the Chemical Composition of the Colours they sell.[340]

To counter these criticisms, the watercolours available were listed in the catalogue table, 'A Classification of Winsor and Newton's Water Colours, in three Degrees of Permanence': permanent, semi-permanent and fugitive (Fig 2.14). Under permanent were Alzarin Crimson, Scarlet, Chinese White, Cobalt Blue, Oxide of Chromium, Permanent Violet, Rose Madder, and Viridian. Moderately permanent colours were those such as Antwerp Blue, Bistre, Bronze, Vermilion and more. The chromiums were more fugitive, Chrome Deep, Chrome Lemon, Chrome Orange, Chrome Yellow, and required the following footnote to clarify: 'Stands light, oxygen, and moisture well, but goes black in time, being extremely sensitive to the action of sulphurated hydrogen'. The fugitive colours included: Indigo, Intense Blue, Olive Green, Sap Green, Carmine Violet and Yellow Carmine, and all the Lakes. A special footnote for Hooker's Green No. 1 and 2, Payne's Gray, Prussian Green, and Scarlet Lake read:

> These mixed colours do not fade right out, but only in respect of their fugitive constituents. Inasmuch, however, as the strength of a chain is only that of its

338 See Timeline on Winsor & Newton website. <http://www.winsornewton.com/uk/discover/about-us/timeline.> [2 Sep 2014].

339 Ball, *Bright Earth*, p. 179. See also Timeline on Winsor & Newton website.

340 Winsor & Newton, 'Trade Catalogue Winsor & Newton Limited, Manufacturing Artists' Colourmen' (London, 1896).

> weakest link, we have been compelled to class them with the fugitive colours.[341]

The technological development of watercolour marked advances in organic chemistry that created artificial organic compounds that did not exist in nature, and formed the basis of synthetic dye industry.[342] New synthetic colours made it possible to establish colours of permanence that were universally stable and reproducible. The developments in watercolour were part of the wider trends associated with the universalising standards brought about by this new capacity for chemical precision. So not only were watercolours transportable but their fixity, as in capacity to stay true to colour over time, and their stability of colour across global space, were also advancing.

Perhaps it was the enthusiasm for the newness of chemical colours, inspired by his watercolour palette, that led Wilson to bring the reference to chemicals into his descriptions of colour effects in Antarctica. These metaphors go beyond those given by the palette of the natural and known world, to include colours of human invention through the mastery of chemistry.

> In the North at noon there was a splendid sunrise with a heavy bank of cloud arranged for all the world like wavy hair, and wherever the sunlight caught those waves and curls it was broken into the most delicate opal mother-o'-pearl tints: all colours of the rainbow, pale rose, pure lilac, emerald green, lemon yellow, and fiery red – blending but with no apparent arrangement, so that a wisp of cloud standing like a stray curl in the blue sky would be lit by pink and brilliant lilac, and then would begin to shine at one end with a light that can only be compared with the light you see in a vacuum tube with a current sparkling through it, or perhaps the colour is more exactly what you get with incandescent barium. It seems far-fetched to go into chemical details to describe a sky, but neither lilac nor amethyst describe the colour I have spoken of as lilac, but the light of incandescent potassium does exactly. One can describe the yellows more easily, because all our ideas of light vary from white to yellow and orange; but for red I like to refer to strontium, through rose-pink describes a certain light chiefly perhaps because one so often sees light shining through a petal of the commonest form of rose.[343]

Wilson is describing the colour effects of the atmosphere in the previous passage using metaphors taken from descriptions of chemical colour. In the

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341 Winsor & Newton. 'Trade Catalogue Winsor & Newton Limited, Manufacturing Artists' Colourmen', p. xxxix.

342 Ursula Klein, 'Technoscience Avant La Lettre', *Perspectives on Science,* **13**, 2 (Summer 2005), p. 226–66.

343 Seaver, *Edward Wilson of the Antarctic*, pp. 121–122.

following extract from the Winsor & Newton catalogue the atmosphere is pointed out as one of the major culprits impairing the colour permanence of their pigments.

> By the permanence of Water Colour we mean its durability when washed on Whatman paper and exposed freely, under glass frame, for a series of years, to ordinary daylight; no special precaution other than the usual pasting of the back of the frame being taken to prevent the access of an ordinary town atmosphere. By an ordinary town atmosphere we signify an atmosphere containing normally, as the active change-producing constituents, oxygen, moisture, and a small percentage of carbonic acid, together with chronic traces of sulphur acids, spasmodic traces of sulphuretted hydrogen, and a certain amount of dust and organic matter in suspension.[344]

In order to apportion blame and responsibility for permanence accordingly, Winsor & Newton used the pages of their catalogue to give precise limits to, and definitions of, the permanence that they promised.

Similar concerns for the negative effects of atmosphere upon permanence were expressed in A. P Laurie's lectures published in *The Journal of the Society of Arts* in 1892, the same year in which Winsor & Newton had first published the lists of permanence and fugacity in their pigments: Laurie's first lecture addressed the pigments, the second dealt with the medium:[345]

> The success in the production of permanent pictures by the great painters of Italy and Holland, encouraged me to inquire into the pigments used by them, with a view to assisting the modern artist in his selection of pigments and methods of painting.[346]

The concern of the first article was the deleterious effect upon pigments of the conditions current in the late nineteenth century.

> Unfortunately, too, there are pigments which while quite legitimate under old conditions, are no longer suitable for use in the polluted air of modern cities. It is also of importance to consider climatic conditions in this connection. For instance, it is an easy task to paint permanent pictures in the dry climate of Egypt- a very difficult one to do the same in England. All these matters have to be taken into consideration, giving us a very complex problem

344 Winsor & Newton, 'Trade Catalogue Winsor & Newton Limited, Manufacturing Artists' Colourmen', p. 23.

345 A.P. Laurie, 'Pigments and Vehicles of the Old Masters, 1', *Journal of the Society of the Arts,* **XL,** 2042 (1892), pp. 150–64, A. P. Laurie, M.A. Lecture II. Delivered 7 December 1891.

346 Laurie, 'Pigments and Vehicles of the Old Masters, 1', p. 157.

to be dealt with.[347]

The extent of a pigment's permanence was compromised by the atmospheres, both geographical and historical, in which it was used. Despite the letter of endorsement from Wilson as to the resilience of the Winsor & Newton art materials in an extreme climate elsewhere, there were challenges to pigments' permanence on the home front from air pollution.

347 Laurie, 'Pigments and Vehicles of the Old Masters, 1,' p. 150.

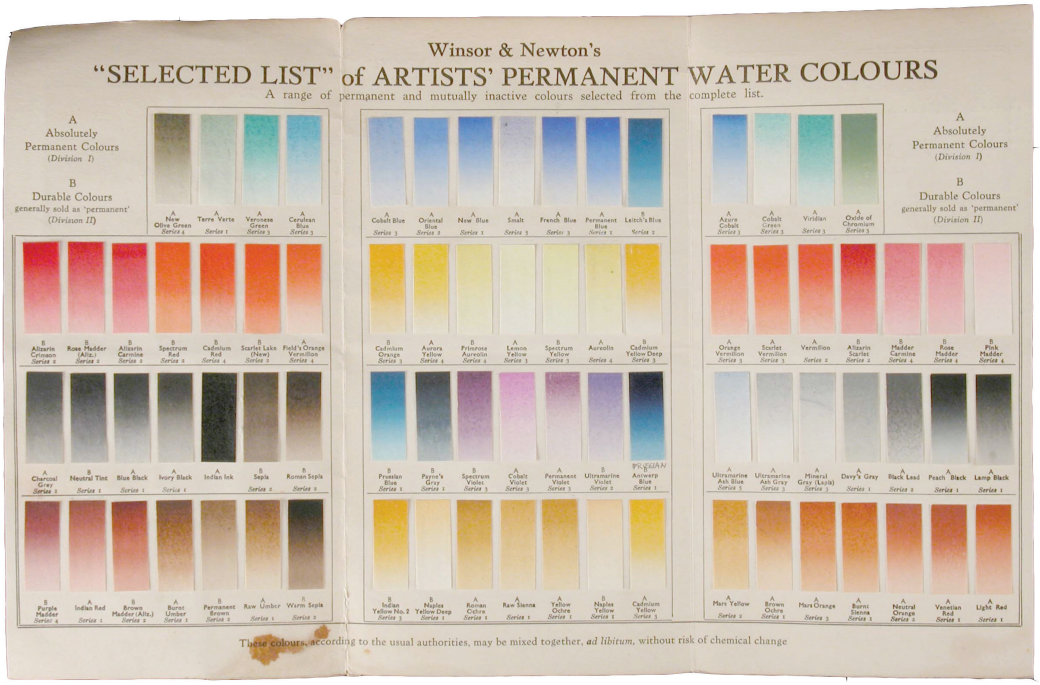
Winsor & Newton's
"SELECTED LIST" of ARTISTS' PERMANENT WATER COLOURS
A range of permanent and mutually inactive colours selected from the complete list.
A Absolutely Permanent Colours (Division I)
B Durable Colours generally sold as 'permanent' (Divinon II)
A Absolutely Permanent Colours (Division I)
B Durable Colours generally sold as 'permanent' (Division II)
These colours, according to the usual authorities, may be mixed together, ad libitum, without risk of chemical change

Fig 2.15

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Fig 2.16

Black and White *Silver Nitrate*

Herbert Ponting (1870–1935) was a documentary photographer, or 'camera artist'[348] employed as the official photographer and cinematographer for Scott's British Antarctic Expedition 1910–1913. According to the Royal Geographical Society, Ponting 'spent his early career travelling through Asia and Europe delivering beautifully composed photographs of landscapes and peoples back to a wide variety of magazines, periodicals, newspapers and publishers'.[349] It was this skill in photographing landscape and people that he brought to the Polar environment and the day-to-day life of his fellow expedition members, which he captured for posterity in numerous portraits. Many of Ponting's portraits seem especially staged, with the product logo clearly visible to satisfy an expedition sponsor. As noted in a footnote to the *South Polar Times*, 'To "pont" became a phrase to express the act of posing for Ponting's photographs'.[350] One of these black and white portraits, titled *Dr E. A. Wilson working on a sketch. 1911* (Fig 2.16),[351] shows Wilson 'ponting' for Ponting.

Wilson and Ponting mark the ending and beginning of two eras: the shift from topographic drawing and watercolour as the means for documenting new geographies, to the use of photography. Wilson and Ponting kept each other company in their endeavours. In his diary, Wilson wrote:

> Ponting is very artistic and he has said some very flattering things about my pictures, and indeed I have also learned a good deal from talking with him about Japanese art and from looking at his perfectly beautiful collection of Japanese photos and lantern-slides. He is an artist with genuine feeling to his finger-tips. I like him more and more.[352]

Wilson admired Ponting's verisimilitude, which is what Wilson pursued in his own painting, and to his wife Wilson wrote of Ponting that he wouldn't 'allow

348 Williams, *With Scott in the Antarctic*, p. 208.

349 Royal Geographical Society, 'Collection Focus – Herbert Ponting (1870–1935)' Royal Geographical Society <http://images.rgs.org/herbertponting.aspx.> [3 Sep 2014].

350 *South Polar Times*, Vol. 3, p. 134. Listed in footnotes as footnote 12 from page 21.

351 Herbert Ponting, 1911, *Dr E. A Wilson working on a sketch. 1911*, (glass plate negative, 17.8 x 15.2 cm), SPRI P2005/5/402.

352 Seaver, *Edward Wilson of the Antarctic*, p. 236.

the shadow of untruth in his work'.[353] For Wilson, Ponting was entirely against the ubiquitous fakery so common in other photographers. Yet photography, even in the hands of one as skilled as Ponting, struggled to capture some of the visual effects of the Antarctic landscape. In this respect it was notably deficient with regard to the reproduction of colour:

> Fri 28 April This evening we had one of the best auroras I have ever seen, very brilliant curtains and moving very rapidly – colour lemon green, and wherever the movement was most rapid the edges advancing – and the lower borders were crimson red. None of the photo plates which we have, though brought down as being especially sensitive for this purpose and the most rapid plates made – and though we have specially rapid lenses for the purpose – will give any results whatever when exposed even to very brilliant displays.[354]

Where photography had failed, Wilson applied his skill with watercolour to capture 'with great accuracy the geometry and colour of ice and atmospheric phenomena, an accomplishment that cameras could not match for almost another hundred years'.[355] In the catalogue entry to the 1904 *Discovery* Antarctic Expedition at Bruton Galleries, London, Paul Konody wrote: 'A remarkable series of water colour drawings by Dr. Edward A Wilson give further suggestions which the camera was unable to record of the solar phenomena which are observed, and the wondrous combination of colour effects in spring and autumn'.[356]

In Ponting's photograph, Wilson is posed at work on a watercolour in the Hut. In this photograph Wilson is seen in profile seated at a desk wearing a tweed jacket and a polar neck jumper. A standard lamp with fingermarks in the dust of its metal shade is supplied by gas. Wilson was aware of the colour-cast that candlelight and acetylene produced and that it might counter his best intentions of colour accuracy, so he took care to correct these distortions of

353 Seaver, *Edward Wilson of the Antarctic*, p. 236.

354 Wilson, *Diary of the 'Terra Nova' Expedition to the Antarctic 1910–1912,* p. 126. Entry dated Fri 28 April 1911.

355 William L. Fox, 'Terra Antarctica: A History of Cognition and Landscape', *Antarctica: Looking into the Emptiest Continent* (Trinity University Press: San Antonio TX, 2005), p. 195. Ponting did produce some, but very few, colour plate photographs of Antarctica. Ponting also used the technique of colour tinting on both his photography and lantern slides. This involved adding colour to the black and white image. Frank Hurley was more successful with his experiments in colour photography.

356 Paul G. Konody, "Discovery" Antarctic Exhibition, Bruton Galleries, 13 Bruton Street, 1904'. Illustrated catalogue, (London: Bruton Galleries, c. 1904), p. 22.

colour by checking how the works appeared in daylight. This meant that he not only needed to try, with help from his annotated sketches, to recall the colours from the landscape scene that he was painting but also, while painting the watercolours in the hut, to anticipate the difference in the appearance of that the finished watercolour paintings would have once removed from the colour-cast of the gas lamp and seen in daylight. He was painting, therefore, always between memory of the colours in the field and anticipation of the colours in daylight. In a letter to his wife from Cape Evans Wilson wrote:

> I have got a whole sketch-book filled with pencil ones – dozens – during the past month at Hut Point and they all have to be worked out before I go to Cape Crozier in July, by acetylene and candle light so they may have to be done over again [a pencil note later – 'no, they are all right by daylight']. [357]

Carbide lamps create acetylene by adding calcium carbonate to water. The by-product is slaked lime, the same component that gave the name to limelight, a bright tinted white light.

> None of this winter's sketches must be looked at in daylight of course. They are all painted by lamplight and by eyes that haven't seen a bit of daylight for a couple of months. Many allowances must be made, but I thought they were worth doing to give an idea of the beautiful tints we get here in these days.[358]

In the photographic portrait, hanging on the wall behind Wilson are heavy mittens, Finnesko boots in reindeer skin, daggers, a pair of crampons and what appears to be a binocular case. A black japanned tin box of moist watercolour in china pans is open before him, with porcelain mixing dishes placed on either side. Paintbrushes stand end up in a cup next to a metal beaker of water with three brushes lying across it, and an open bottle of ink. Wilson is pictured at work as he holds the tip of the paintbrush against the paper, and frowns intently at a watercolour of a paraselene (Fig 2.17).[359]

According to reports by his fellow expedition members and witnesses to Antarctic phenomena, Wilson achieved scientific accuracy in the resulting paintings.

> If you look at a picture of a parhelion by Wilson not only can you be sure that

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357 Seaver, *Edward Wilson of the Antarctic,* p. 237.

358 Wilson, *Diary of the 'Discovery'*, p. 172.

359 Edward Wilson, *May 13, 1911,8am Paraselena* [*sic*]. *Cape Evans, McMurdo Sound* (watercolour on paper, 37.2 x 27.2 cm), SPRI N:466.

> the mock suns, circles and shafts appeared in the sky as they are shown on the paper, but you can also rest assured that the number of degrees between, say, the sun and the outer ring of light were in fact such as he has represented them. You can also be certain in looking at his pictures that if cirrus cloud is shown, then cirrus and not stratus cloud was in the sky; if it is not shown, then the sky was clear. It is accuracy such as this which gives an exceptional value to work viewed from a scientific standpoint.[360]

Ponting's Antarctica was black and white, preserved in thousands of glass plate negatives, their prints, and lantern slides, conveying the drama of monochromatic world. The technology of the time was unable to do justice to the colours of Antarctica, as his failed efforts with colour photography prove. Wilson's works were begun as monochrome, as quickly executed pencil sketches made out in the open. With the help of his annotated drawings, Wilson had to work against the distortions of memory and lighting, to restore accurate colour to the watercolour paintings that he produced in the hut. Ponting's portrait of Wilson shows documentary black and white photography at its best, but illustrates Wilson working on a paraselene, (the moonlight variant of a parhelion described in the quote above). Paraselenae and parhelia are exactly the type of atmospheric phenomena that Ponting's photography struggled to record, and which Wilson was so adept at conveying with his watercolour technique.

360 Cherry-Garrard as quoted in Seaver, *Edward Wilson of the Antarctic*, p. 262.

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Fig 2.17

Colour in Nature *Pharmakon*

Turner was keenly interested in the technical aspects of painting, as exemplified in his lectures and associated diagrams on perspective as Professor of Perspective at the Royal Academy. An aspect of this is demonstrated in *Lecture Diagram: The Reflection and Refraction of Rays of Light* circa 1817–28.[361] Turner's analysis of reflection and refraction concerned the perception of these effects in nature when making observational paintings and drawings. In Antarctica the accuracy of the observed horizon can often be subject to atmospheric distortions caused by refraction. These deceptive horizons are due to the bending of light as it crosses the boundaries between layers of air of different temperatures. Consequently the perception of the horizon can be significantly distorted. The horizon is used as a datum in orientation on expeditions. This same horizon, when unobservable, can be substituted for by a false horizon, a mercury-filled device that supplies the reference point.

The variation of reflection and refraction across individual pigments and vehicles is integral to the visual effects produced by the medium of watercolour.

> Light from the light source travels through the paint. This gives two opportunities for light to be absorbed by the pigment, which can be responsible for giving watercolour its particular colour-purity.[362]

The quality of transparency is reliant upon the support, that is the paper surface, in ways that are not significant in other paint media such as oil and acrylic. Technical developments in paper played their part too in the advancement of watercolour. They included the late-eighteenth-century innovation that replaced laid paper with wove. Laid paper was produced by laying paper pulp over a 'parallel rectilinear wires so that a ribbed, grid-like pattern was impressed upon the sheets'[363] leaving visible lines in the paper surface, while wove paper was made upon a much finer wire mesh that left

361 Andrea Fredericksen, 'Lecture Diagram: The Reflection and Refraction of Rays of Light c.1817–28 by Joseph Mallord William Turner', catalogue entry, June 2004, revised by David Blayney Brown, January 2012, in David Blayney Brown (ed.), *J.M.W. Turner: Sketchbooks, Drawings and Watercolours,* December 2012 <https://www.tate.org.uk/art/research-publications/jmw-turner/joseph-mallord-william-turner-lecture-diagram-the-reflection-and-refraction-of-rays-of-r1136736> [18 June 2015].

362 Don Pavey, *Colour Concepts Palettes and Pigments* (London: Colour Academy, 2014), p. 194.

363 Moorby 'Water+ colour: Exploring the Medium', p. 25.

no gridding. Wove paper gave watercolour a support that did not interfere with the transparency and luminosity of which it was capable, but rather accentuated it.

The extent to which the light is returned from the paper surface through the pigment suspended in medium is determined by both reflection and refraction. In his online resource for artists, Bruce MacEvoy describes how:

> Pigment 'transparency' depends upon the ratio between the refractive index of the pigment and the medium around it, the RI ratio.[364]

In the case of watercolour, MacEvoy explains, the watercolour paints:

> strew the almost naked pigment particles across the cellulose fibers and crannies of the paper. Their RI ratio is determined by the refractive index between pigment and *surrounding air*.[365]

So the brilliancy of watercolour is a combined effect of the paper support, the surrounding air, and the distribution of pigment. Another characteristic of watercolour is the way in which it changes its appearance from wet to dry. Don Pavey explains this change:

> The colour appearance of watercolour also lightens as the paint dries. Since the evaporating drops of water (refractive index 1.3) are replaced by air (refractive index 1.0), an increasing proportion of light gets scattered within the paint layer, giving the dried painting a paler appearance than when wet.[366]

Wilson may have found another of the books that he took with him to Antarctica of interest with regard to the effects of colour. Wilson wrote in his diary on Tuesday 4th August 1903, during the winter of the Discovery expedition:

> Got hold of a book by Newbigin, a lady professor at Edinburgh University on *Colour in Nature,* which I think looks very interesting. It is not artistic, though it sounds like it, but 'awfully scientific'.[367]

The book to which he refers is *Colour in Nature; A Study in Biology* published in 1898 by Marion Isabel Newbigin,[368] a lecturer in Zoology at the medical college for women in Edinburgh. In this book Newbigin aimed to make

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364 Bruce MacEvoy, 'Refractive Index', <http://www.handprint.com/HP/WCL/pigmt3.html#refractiveindex> [17 June 2015]. para. 5/10.

365 Bruce MacEvoy, 'Refractive Index', para. 5/10.

366 Don Pavey, *Colour Concepts Palettes and Pigments,* p. 204.

367 Wilson, *Diary of the 'Discovery'*, p. 280–81.

368 Marion Newbigin, *Colour in Nature: A Study in Biology* (London: John Murray, 1898), p. 1.

connections with Darwin's theory on the 'Struggle for Survival' understanding that colour must play its part:

> To those who have not followed closely recent developments in Evolution Theory, the connection between Biology and Colour may seem very remote. The phenomena of colour, it may be said, are entirely the province of the physicist; that the sky is blue and the grass is green are two facts of similar nature, and the one is as inexplicable as the other[…]. A little reflection will, however, convince every one that the biologist cannot afford to be indifferent to the colours of the organisms with which he has to deal.[369]

Newbigin's book addresses the use of colour in the struggle for survival, for example in animal mimicry of its environment and as an excessive and decorative addition that makes creatures more appealing and thus successful in sexual selection.

While not aspiring to cover the territory of physics, Newbigin needed to set out some ground rules, especially in the distinction between pigment, or intrinsic colours, and optical or extrinsic colours. As Wilson noted, her investigation was not an artistic one, but to demonstrate her point, Newbigin chose an example from art to compare with one from nature: she compared an artist's pigment, Chinese White, with snow:

> White sunlight is produced by the combination of all the tints of the rainbow. When objects permit light to pass completely though them, we call them transparent; when they reflect all the rays of the light uniformly, we call them white. This whiteness may be produced in one of two ways. A substitute such as "Chinese White" is white because it is a property of the particles of which it is composed to reflect equally all the rays of incident light; it is further a familiar fact that Chinese White can be employed to impart its own colour to other objects, that is, it can be employed as a pigment. Snow, on the other hand, is white, not because its individual particles reflect the light – on the contrary they are transparent – but because these transparent particles are separated by bubbles of air. The incident light in passing from one medium to the other is bent or refracted, and the result is the appearance of whiteness.[370]

Reading this book may have given Wilson pause for thought as to his use of chemical associations when describing colours in the icy landscape of Antarctica, as an unnatural 'colourscape', or perhaps he may have looked upon the effects that he achieved with his watercolours and contemplated the

369 Newbigin, *Colour in Nature*, p. 1.

370 Newbigin, *Colour in Nature*, p. 10.

extent of their intrinsic and extrinsic colour effects. He would have certainly considered Newbigin's thoughts in relation to the natural history of the specimens before him, and that he depicted in his natural history paintings (Fig 2.18).[371] Her book may well have suggested insights into the part in evolutionary advantages these colours may have played, as well as a sensitivity to the natural history of the pigments themselves and the media through which they were transferred.

371 Edward Wilson, 1901–1904, [1&2] *Catarrhactes Schlegeli – immature and adult, [3] Megadyptes Antipodum – fresh moulted adult* (watercolour on paper, 22.2 x 29.5 cm) SPRI, N: 1502

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Fig 2.18

The History of Art *Natural History*

With the advent of modernity in art, with its discourse around truth to material and specificity of each art according to its medium, painting increasingly established its identity in opposition to the literary. Modern painting was not-literature, not-narrative, whereas earlier Victorian art had embraced the idea of poetry and narrative. The historical moment in Edwardian Britain at which modernist values in art emerge consists of multiple modernisms. This includes the example of the Victorian so-called Problem Paintings, which invited narrative interpretations of an increasingly contested nature.[372]

Yet with the rise of modernism, and in a retrospective distortion, the defining quality of an artwork becomes the irreducible nature of its formal mediation – the specificity of its nature as painting. The capacity for a satisfactory *ekphrasis* into another mode is only a mark of its weakness as it loses its medium-specific identity.

The art historical orthodoxy aligns the avant-garde with French and Parisian practice in the late nineteenth and early twentieth centuries. This retrospective orthodoxy does not allow for a variety of modernisms that are context-specific.

> England in this period [1860–1914] was a highly modernized society but the art it produced was not 'modernist' in the sense that the word has been used to describe French art of the nineteenth and twentieth centuries.[373]

But it has been argued that the writing of art history is not a matter of reflection, but one of what I would call refraction through the medium of the textual practice of history or criticism itself. Of the art historian's texts, David Carrier writes that they 'can never transparently represent the artworks' because they are textual representations themselves and as such are governed by implicit rules.[374] W.J.T. Mitchell also notes that:

> Insofar as art history is a verbal representation of a visual representation, it is

372 Pamela M. Fletcher, 'Masculinity, Money and Modern Art: *The Sentence of Death* by John Collier', in *English Art 1860–1914,* ed. by David Peters Corbett and Lara Perry (New Brunswick, New Jersey: Rutgers University Press, 2001).

373 Peters Corbett and Perry (eds), *English Art 1860–1914: Modern Artists and Identity*, fourth cover.

374 David Carrier, *Principles of Art History Writing* (Penn State University Press, 1991), p. 239.

> an elevation of ekphrasis to a disciplinary principle.[375]

This ekphrastic principle, such as found in art history, is the ekphrastic principle through which I propose the making of art work out of the archive of Wilson's watercolours, and the ekphrastic method by which I am addressing the observational practices of open-air watercolour painting, anthropology and geography.

Turner was inclined to present his paintings in association with lines of poetry. [376] According to Burnet's 1859 memoir, it was Turner's 'wish to become a poet', although his efforts were apparently quite awful.

> It was his wish to become a poet. Some of our poets were ambitious of being painters – Pope, Thomson, Dyer, and Cowper: but the specimens of their genius in a sister art could hardly have been worse than Turner's was in poetry. [ ] What led him to believe that his poetry helped to explain his pictures, I am at a loss to imagine.[377]

Looking back with a Greenbergian modernist anti-ekphrastic attitude,[378] Turner's ham-fisted attempts to poetically illustrate his paintings are only taken as greater proof of the glory of the original works and their irreducibility to other mediums. Note the cautionary advice not to align Turner with twentieth-century modernism and the kind of abstraction that annuls some of those historically specific aspects of his work that make it entirely of its time.

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375 W.J.T Mitchell, 'Ekphrasis and the Other', in *Picture Theory: Essays on Verbal and Visual Representation* (University of Chicago: University of Chicago Press, 1994), p. 157.

376 Peter Cunningham, 'The Memoir', 1859, in John Burnet, *Turner and his Works* (London: James S. Virtue), p. 23.

377 Cunningham 'The Memoir', p. 23.

378 Clement Greenberg, 'Towards a Newer Laocoon'. Elizabeth Prettejohn discusses the use Greenberg makes in this text of examples of academic painting that Prettejohn argues belong in a different modernist trajectory from the one described by Greenberg, in which medium specificity excludes narrative from the realms of painting. See Elizabeth Prettejohn, 'The Modernism of Frederic Leighton' in *English Art 1860–1914,* p. 34-36.

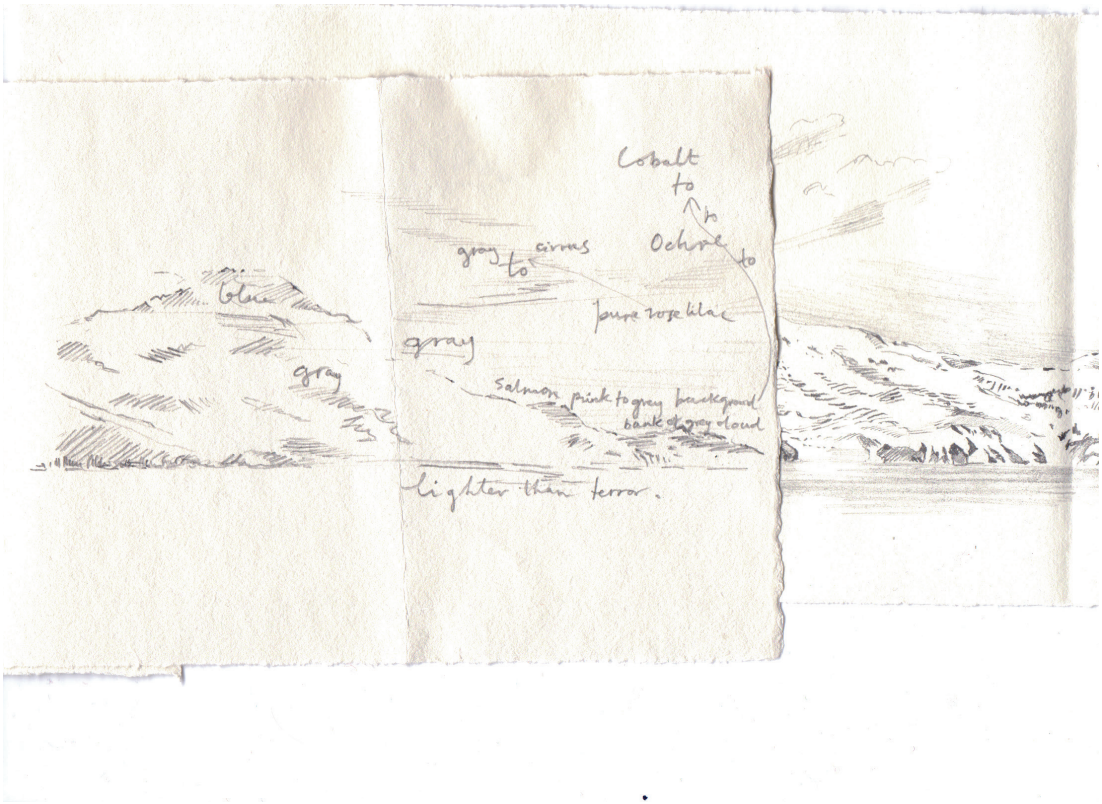
Cobalt
to
Ochre
to
gray
to
cirrus
pure rose lilac
gray
gray
Salmon pink to gray background
bank of gray cloud
lighter than terror.

Fig 2.19

Of Turnerian Topography *The Study of Geography*

Writing in *Modern Painters*, Ruskin recounts the qualities of truth for landscape painting in a section titled 'On Turnerian Topography'.[379] Ruskin is an apologist for Turner's interpretation of the truth of landscape. Great art requires invention rather than just copying,[380] he argues, but what is the order of this invention? Ruskin wrote that 'historical art is simple topography',[381] conveying facts, while imaginative art, in his view, is Turnerian topography. In this argument he offers the instruction 'that every class of rock, earth and cloud, must be known by the painter, with geologic and meteorological accuracy'.[382] Not just for the sake of general accuracy but because of the pursuit of uniqueness in one's representations. 'Every geological formation had features entirely peculiar to itself', the reason being that 'its classes cannot be generalized or amalgamated by any expedients whatsoever'.[383] Classification or typologies are uselessly reductive. Ruskin writes:

> The level marshes and rich meadows of the tertiary, the rounded swells and short pastures of the chalk, the square-built cliffs and cloven dells of the lower limestone, the soaring peaks and ridgey precipices of the primaries, having nothing in common among them – nothing which is not distinctive and incommunicable. Their very atmospheres are different.[384]

The instructions are somewhat contradictory, as it appears that the artist must know these scientific classifications in order to render their representations individual.

> It is utterly futile to talk of generalizing their impression into an ideal landscape, as to talk of […] confounding all thought into one ideal idea.[385]

Ruskin gives the instruction to draw what you see, yet he acknowledges that some see differently to others, and it is a virtue for people such as these to draw their own truths:

379 John Ruskin, 'On Turnerian Topography', in *Modern Painters* Vol. V, 5th edn.
380 Ruskin, 'On Turnerian Topography'. p. 16.
381 Ruskin, 'On Turnerian Topography'. p. 16.
382 Ruskin, 'On Turnerian Topography'. p. xxxvii.
383 Ruskin, 'On Turnerian Topography'. p. xxxvii.
384 Ruskin, 'On Turnerian Topography'. pp. xxxvii–xxxviii.
385 Ruskin, 'On Turnerian Topography'. p. xxxviii.

> the simplest of all cannons, – 'it is always wrong to draw what you don't see'. This law is inviolable. But then, some people see things that exist and others see things that do not exist, or do not exist apparently. And if they really see these non-apparent things, they are quite right to draw them.[386]

Yet for Ruskin, no one should pretend to see what he or she does not see. Although great art is distinguished by the addition of imagination to the facts, according to Ruskin, not all who make art should aspire to this elevated state.[387] The topographic artist's choice of topic is a great responsibility; the topic should be of interest to others, preferably for posterity, for example views of great buildings, 'distant views of cities', 'battle fields', and 'the most lovely natural scenery'. The artist here is a 'skilful reflector',[388] yet also an editor, Ruskin suggests, writing statements to encourage the wilful omissions of eyesores in the picturesque (such as ugly hotels meant for the English tourist).[389]

The artist may try to convey the feeling for the place to the viewer of the work, but Ruskin gives the warning:

> Now observe; if in his attempt to do this the artist does not understand the sacredness of the truth of **Impression**, and supposes that once quitting hold of his first thought, he may by Philosophy compose something prettier than he saw, and mightier than he felt, it is all over with him. Every such attempt at composition will be utterly abortive, and end in something that is neither true nor fanciful; something geographically useless, and intellectually absurd.[390]

Then Ruskin has something to say as to how Turner works on the facts of what a scene offers to him, not by conceptual but intuitive means: Turner distorts and modifies the view into a picture by 'an entirely imperative dream'.[391] Ruskin then calls this dream-like process a 'mental chemistry'.[392] This description brings to mind my use of the psychoanalytical dream analysis method of *Entstellung,* with regard to refractive method. Ruskin seems to suggest that there may be a different kind of truth in this transposition of

386 Ruskin, 'On Turnerian Topography'. p. 16.
387 Ruskin, 'On Turnerian Topography'. p. 17.
388 Ruskin, 'On Turnerian Topography'. p. 19.
389 Ruskin, 'On Turnerian Topography'. p. 20.
390 Ruskin, 'On Turnerian Topography'. p. 23.
391 Ruskin, 'On Turnerian Topography'. p. 25.
392 Ruskin, 'On Turnerian Topography'. p. 28

observed reality through what Ruskin calls Turner's 'imperative dream'.[393]

It can be seen that Ruskin proposes simultaneously two quite contrasting ideas of truth to topography, one appealing to an external reality that is observed and represented, and another that is founded on the subjective truth of impression articulated by a 'great master' such as Turner:

> Pure history and pure topography are most precious things; in many cases more useful to the human race than high imaginative work; and assuredly it is intended that a large majority of all who are employed in art should never aim at anything higher.[394]

Ruskin is happy to allude to this idea of pure unmediated history and topography in art as the highest ambition – for most.[395] Yet, like the facts of history, the facts of topography do not come to us pure. If the writing of art historians is refracted through various media and atmospheres, so too is the artist's representation of topography (Figs 2.19 & 2.20).

393 Ruskin, 'On Turnerian Topography'. p. 25.

394 Ruskin, 'On Turnerian Topography', p. 17.

395 Ruskin, 'On Turnerian Topography', p. 17.

Fig 2.20

Fig 2.21

Everything Wanders *Typology*

Antarctica remained a hypothetical place until James Cook first crossed the Antarctic Circle in 1773. He might have seen land but the pack ice obstructed further progress. Land was not sighted until nearly fifty years later.

> It is now reasonably certain that Bellingshausen sighted the Antarctic continent several times, notably on 27 January 1820 (New Style) at a point about lat 69°21'S, long 2°14'W, and was thus the first to see it.[396]

It remains an issue of dispute as to whether Fabian Gottlieb von Bellingshausen understood, or was able to convince others of, the significance of what he saw. Terence Armstrong asks if Bellingshausen was able to communicate this to contemporary audiences who were wanting to hear news of a land continent, and did not reckon that an 'ice continent' counted as truly continental.[397] In the history of exploration, discovery has been determined by a set of criteria based upon the search for land. Ice does not figure. Land is defined as the earth's surface and in opposition to water; as that which is not water, and not under water. Inherently fixed, land is defined as that which is above sea level. When, as in the case of Antarctica, the solid surface above sea level is also made of frozen water, these distinctions are confronted with an anomaly. Perhaps the changing contours of Antarctica also make it fugitive, like watercolour pigment. 'Fast ice', in contrast to 'drifting ice', is fixed to the land mass and not subject to movement. Yet if we follow the criterion of land as being 'not water' then 'fast ice' fails to be classed as land under this categorisation as it is not 'not water'.

During the era of what Felix Driver called 'Geography Militant' and the 'Age of Discovery' that took place between the fifteenth and seventeenth centuries,[398] new lands were first seen from the sea, especially as much exploration had necessitated a sea voyage. The Heroic Era of Antarctic Exploration necessitated long sea-voyages. The ships had to sail the oceans

396 Terence Armstrong, 'Bellingshausen and the Discovery of Antarctica', *Polar Record*, **15**, 99 (1971), pp. 887–89, p. 887.

397 Armstrong, 'Bellingshausen and the Discovery of Antarctica', p. 887.

398 Driver, *Geography Militant: Cultures of Exploration and Empire.*

from the UK to New Zealand. This era had a need for accurate instruments,[399] and expeditions were often charged with testing new equipment. Technologies of visualisation and inscription were necessary, such as watercolour.[400]

The production of portable black-Japanned tin boxes like those pictured in the 1896 *Winsor & Newton Trade Catalogue* (Fig 2.13) offered moist pans of watercolour in portable sets with integral palettes, all contained in a Japanned tin box that could fit neatly in a side pocket, and could aid an artist who wished to work in the open air. This advert also promised the innovation of a 'V' spring, which in this instance meant that the pans of colour were 'thus held firmly, and the long-felt inconvenience of cementing the china pans *to the Bar*, and of removing them when empty, is avoided'.[401] The advert goes on to say that, 'The improvement is a valuable one to deliver to dealers no less than to Artists, as any colours in a Box can be at once changed to suit the requirements of the customer, and pans can be moved from one position to another at pleasure'.[402] Versatile, portable, and moveable, the transportable virtues of this box of paints echoed the function of watercolour as a fugitive medium (Figs 2.21 & 2.22).

Yet, while aboard the ship *Discovery* en route to Antarctica in 1901, Wilson complained in his diary, of the effect upon his watercolours:

> My paint-box has been upset more times than I can say, and this in the Tropics where most of the paints are semi-fluid and all get swamped in pasty vermillion, makes it hard to know where you are. Everything wanders if it isn't chained up. Every single thing that isn't fixed or wedged in is on the floor in the morning – ink, red and black, candle grease, medicines, soapy slops, all get mixed up from time to time with everything in the cabin.[403]

What are not portable in the artist's case of pencils and paints are the atmospheres, the climates and conditions in which they are used. The medium's

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399 See Bruno Latour, *Science In Action: How to Follow Scientists and Engineers Through Society* (Milton Keynes, 1987); and Bruno Latour, 'Visualisation and Cognition: Thinking with Eyes and Hands', *Knowledge and Society*, **6** (1986), pp. 1–40.

400 Driver, *Geography Militant: Cultures of Exploration and Empire*, p. 29.

401 Winsor & Newton. *Trade Catalogue Winsor & Newton Limited, Manufacturing Artists' Colourmen,* p. 12.

402 Winsor & Newton. *Trade Catalogue Winsor & Newton Limited, Manufacturing Artists' Colourmen,* p. 12.

403 Seaver, *Edward Wilson of the Antarctic,* pp. 79–80.

very material substance can experience challenges at either extreme beyond the temperate zones: in the Polar regions watercolour will freeze, in the tropics, as recalled in Wilson's diary entry above, the pigments melt into useless confusion.

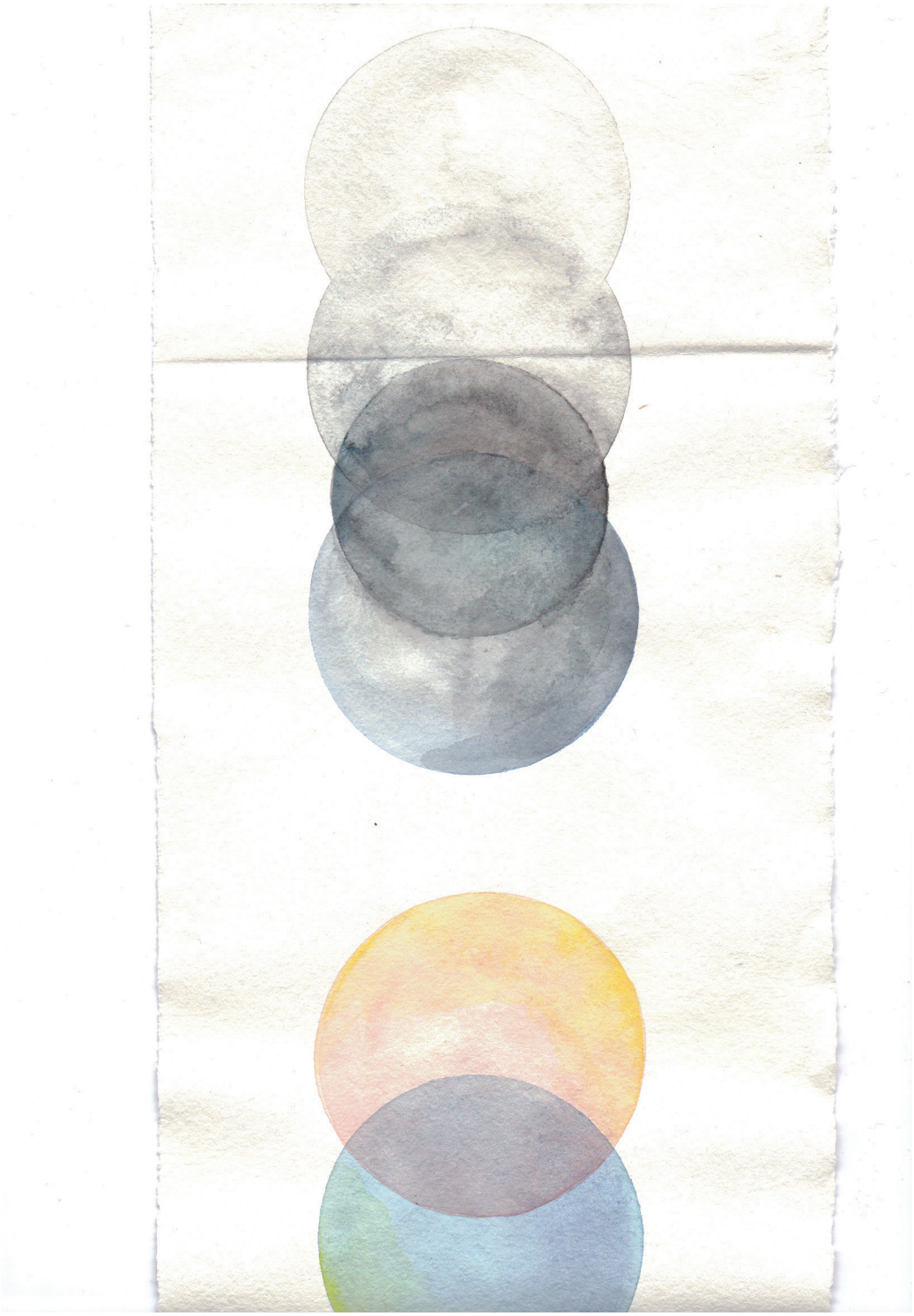

Fig 2.22

Watercolour *The Colour of Water*

In 1892, The Society of the Arts established a committee to investigate 'The practicality of formulating a standard of colour'.[404] Captain Abney was commissioned to produce of a set of formulas by which:

> a patch of light accurately representing the standard colour can be produced at any time and place.[405]

These standards were required in order to create the possibility for communicating a kind of datum for calibrating observations involving colour. Watercolour as a portable medium for the making of topographic images was part of a history in topographical documentation that went hand in hand with imperial expansion by sea.[406] But, as we have seen, watercolour's use as a documentary medium was undermined by its chemical instability, which meant that the witness it bore to the territories thus described could be subject to significant change over time as colours faded. To remedy this, Winsor & Newton had tried to achieve temporal endurance in their watercolour's permanence by developing their pigments and providing artists with the table of their permanence and fugacity. These trends were part of broader late-nineteenth-century ambitions to create standards, which can be noted in Captain Abney's efforts to produce a standard of colours reproducible anywhere at any time.

Commenting on Ruskin's aphorism in *Modern Painters* 'A fool always wants to shorten space and time; a wise man wants to lengthen both', Wilson wrote:

> We must be awful fools at that rate, for our one desire is to shorten the space between us and land. Perhaps Ruskin would agree that we are awful fools to be here at all, though I think if he saw these new mountain ranges he might think perhaps it was worth it.[407]

An aphorism is a general truth or maxim, or a pertinent observation, or a statement of principle, meant to have general and universal applicability. Like

404 Barrett, J.P., 'Journal of the Society of Arts: Report of the Council', *Journal of the Society of the Arts,* **XL**, 2067 (1892), pp. 769–84, p. 777.

405 Barrett, J.P., 'Journal of the Society of Arts: Report of the Council', p. 777.

406 See Tony Rice, *Voyages of Discovery: Three Centuries of Natural History Exploration* (London, Hong Kong: Scriptum Editions, 2000).

407 Wilson, *Diary of the 'Discovery'*, p. 223.

Captain Abney's standard colour, which was conceived as reproducible 'at any time and place',[408] or the global reproducibility and enduring permanence of Winsor & Newton pigments, the aim of which was to overcome contingency and location, an aphorism is meant to have universal application. But Wilson wrote that in his opinion Ruskin's aphorism 'certainly doesn't hold down here'.[409]

Just as Ruskin's aphorism did not hold in Antarctica, neither did some aspects of watercolour, as either practice or medium. The extraordinary climate and conditions of Antarctica had posed challenges to watercolour on both counts. In Wilson's efforts to extract from Ruskin's *Modern Painters* the 'soundest principles' by which to give instruction on sketching and painting in Antarctica, he noted that these principles, too, must be modified by the specifics of Antarctic conditions[410] most especially the climate. The watercolour paints froze at polar extremes and melted at the tropics. Watercolour, it seemed then, was best practised within the temperate zones. Neither Ruskin's principles nor his aphorism could 'hold' in Antarctica.

As regards the conservation of those outcomes of watercolour practice in works on paper, even in a temperate climate, Winsor & Newton's permanent colour was only permanent within certain parameters. As indicated in the 1896 catalogue, the atmosphere and the pollution of industrialised Britain was a factor reducing the longevity of its pigments. The effects of air pollution were mentioned in other contexts too: in the discussion following A.P. Laurie's 1892 Royal Society Lecture 'On the durability of modern pigments' regarding the conservation of art the chairman commented on,

> the exceedingly severe test to which they were subjected in the atmosphere of great cities, and of London in particular. The present state of London statues illustrated very forcibly the state of our climate.[411]

A visiting artist twenty years earlier, in 1870–1871, had surprised Royal Academicians by 'expressing his admiration for the foggy gloom of the

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408 Barrett, J.P., 'Journal of the Society of Arts: Report of the Council', p. 777.

409 Wilson, *Diary of the 'Discovery'*, p. 223.

410 Wilson, 'Notes for a Lecture', MS 1225/3.

411 Discussion after A.P.Laurie, 'On the durability of modern pigments in oil', *Journal of the Society of Arts*, **XL**, 2,051, pp. 383–87, p. 386.

London streets' and wondering why they did not introduce it in their paintings.[412] Wilson noted one of these effects in his diary during some days spent in London dated 4 January 1901 in the company of his older sister, Polly, in preparation for his departure for Antarctica on the *Discovery*:

> There was such a darkness in London from an overhead fog, the whole day long, that all the lamps were lit and the day looked exactly like night.[413]

These atmospheres were the changes in the weather that Ruskin lamented in 'the storm clouds of the nineteenth century'[414] in 1884 and which he claims would have made his *Modern Painters* un-writable. His advice and principles written therein had been inspired by and written for a historically different climate and weather.

So regarding the aspiration to a universal 'any time and place' application of the practice and preservation of watercolour, atmospheres and climate must be taken into consideration, but in addition to this, attention must also be paid to the medium's vehicle, or the carrier of the pigment. As a medium, watercolour is particularly integrated with and dependent upon a whole series of other factors that might initially seem to be extrinsic to the matter of pigment. Phillip Ball writes that:

> The colour of a paint depends not only on the colour of pigment but also on the fluid binding medium, as well as the reflective properties and absorbency of the surface to which it is applied, the texture of the finish and the shape and size of the particles themselves, not to mention the effects of aging.[415]

The fugacity or permanence of pigments depends upon the medium in which they are suspended, 'most fugitive pigments are permanent if protected from moisture and a still larger number, if protected both from air and moisture'.[416] With regard to this, A.P Laurie had insisted in this lecture 'Pigments and Vehicles of the Old Masters' that the permanence of pigment is crucial, but

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412 Referring to the comments of Gerome, a French artist who 'took refuge' in London during the Franco-German war. George Dunlop Leslie, *The Inner Life of the Royal Academy* (London: John Murray, 1914), p. 195.

413 Wilson, *Diary of the 'Discovery'*, p. 25.

414 Ruskin, *The Storm Cloud of the Nineteenth Century*, p. 137.

415 Ball, *Bright Earth*, p. 35.

416 A.P. Laurie, 'Pigments and Vehicles of the Old Masters: Mediums, 2', *Journal of the Society of the Arts,* **XL,** 2043 (1892), pp. 171–78, p.173 (A. P. Laurie, Cantor Lectures. M.A. Lecture III. Delivered 14 December 1891).

concluded that even more essential was the pursuit of an improved medium:

> A medium that will isolate the pigments one from another, and protect them from external influence.[417]

This was not just an issue of the a pigment's permanence but also one that concerned the medium that carried those pigments: the two could not be dissociated in addressing the problem of fugacity, and the two were implicated in the depredations caused by the contemporary industrialised atmospheres.

In watercolour that medium is water. The solvent used in watercolour is identified as one of the key factors in its fugacity, but its wateriness must also be understood as one of its key qualities.

> In general, the evolution of watercolour has been compelled by its two most distinctive qualities, its liquidity (or wateriness) and its transparency (the way that light is reflected from the paper beneath).[418]

The evolution of watercolour can be traced through the innovations in the artists' practices, as with Turner and Wilson, or through the technical development of the medium. Winsor & Newton claim that their innovation in 1835 of 'the world's first moist watercolours' was a motivating factor in the history of art: 'Winsor & Newton develop the first glycerine-based, moist water colours changing the history of outdoor painting'.[419] In reality the histories are intertwined and mutually productive of one another.

The previous quote evokes the term 'evolution' for these historical developments. Water as an anomalous liquid, is both the vehicle for watercolour pigments and the ubiquitous carrier of life: it has then, played a crucial role in both the evolution of watercolour as a medium and in evolution in biological and Darwinian terms. According to Ball, water is a 'weird liquid', it does not behave like other liquids: below four degrees, rather than continuing to increase density, it becomes less dense as its temperature falls. That is the reason why frozen water floats, and why, in a frozen lake, water freezes from the top down, keeping warmer water insulated below where life can continue in relative comfort. This is one of the 'anomalies of water'.[420] Ball

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417 Laurie, 'Pigments and Vehicles of the Old Masters: Medium, 2', p. 178.

418 Moorby, 'Water + Colour: Exploring the Medium', p. 28.

419 See Timeline on Winsor & Newton website. <http://www.winsornewton.com/uk/discover/about-us/timeline.> [2 Sep 2014].

420 Phillip Ball, *Water is Weird,* Royal Society of Chemistry Talk, April 2011.

goes on to explain how it is the complexity and difference of water from other liquids that makes it indispensible to life. It plays a crucial part in information transfer and, as it is the solvent for the other chemicals that support life, it is party to the process of inheritance in Darwinian evolution:

> It is not sufficient, in this context to imagine a clear separation between the 'molecular machinery' and the solvent. There is a two-way exchange of behaviours between them, and this literally erases any dividing line between the 'biological components' and their environment. Water is an extraordinarily responsive and sympathetic solvent, as well as being far more than merely a solvent. If living systems depend on that kind of exchange, for example so that molecular information can be transmitted beyond the boundaries of the molecules that embody them, it is tempting to conclude that it would need to make use of water.[421]

Wilson's work as a painter of natural history specimens may have alerted him to some of the evolutionary significances of his specimens' pigmentation as explored in Newbigin's *Colour in Nature*.[422] According to Ball's assessment of this anomalous solvent, that same water, so crucial in the evolution of watercolour, by which Wilson made his painted descriptions, may have also been as integral to the evolutionary process of the natural selection represented in the colour characteristics of those specimens. As an artist's medium, the part that water plays in watercolour must also be understood as intimately involved in the effects and phenomena of watercolour as a carrier of colour.

Fluidity is also one of the noticeable qualities of water and links to what Doreen Massey calls a 'topography of flows', a way of describing the relational interconnectedness of space and time, of place and histories, that takes into account the specificities of contemporaneous material-discursive productions.[423] In this chapter I have made refractive connections between different times and places through the archive of Wilson's watercolours, to map my version of a 'topography of flows'[424] through this historical material and by considering the material and discursive interconnectedness of particular encounters and examples. By paying attention to the permanence and

421 Phillip Ball, *Water is Weird,* p. 23.

422 Newbigin, *Colour in Nature*, p. 324.

423 D. Massey, *For Space*, p. 194.

424 D. Massey, *For Space*, p. 194.

fugacity of watercolour, other relations of fixity and flow can be interpreted. I have brought my method of refraction and *ekphrasis* to focus on these shifts between.

In one of Wilson's annotated sketches there is an *ekphrasis* of what he could not use watercolours to describe in the open air: a brief description of an especially intense episode of colour in the sky and on the ice. It is followed by the exclamation 'Colour!' written diagonally across the sketch (Fig 2.23).

> Apr.18.11.5pm. Looking S. from Cape Armitage at a wonderful afterglow, all the foreground ice foot white and v. pale green tint and grey detail against the most amazing blue violet & rose pink red imaginable – nothing could be too extravagant in the contrast. Colour![425]

I propose that in the pairing of water and colour in the practice and medium of watercolour, other influences must be taken into consideration regarding the ground zero of topography – these being the effects of atmospheres and climates, as well as the medium itself. The dominance of geology in topographical illustrations is an example of the preference for the permanent against the mutable: a preference for rocks and coastline against the weather and the climate. Yet rocks flow, too, but at speeds of such slowness that they appear to be the solid stuff of immutability to a human sense of duration. These differences of material stability can be understood as a function of the temporal scale at which they are viewed. If the idea of a ground zero of topography as the stable referent, or as a datum for making observations, is undone, then the focus of attention can shift to the relation between geology and atmosphere. In Wilson's previously mentioned field note, he adds the verbal exclamation 'Colour!' But I have shown that further exclamations should apply in the *ekphrasis* of the environment of Antarctica. In my interpretations of Antarctica through the archive of the Wilson watercolours, I should like to add two further exclamations: one at the medium itself: Water! And the other as a response to the enveloping atmospheres: Air!

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425 Edward Wilson, *Looking S from Cape Armitage* (pencil on paper, 11 x 12.6 cm). From an album of pencil sketches by E. A. Wilson, Vol. II: *Landscapes, analytical drawings of ice crystals and earth formations, with explanatory notes*, SPRI N: 1802/12.

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Fig 2.23

Chapter Three
Antarctica through the Archive

Fig 3.1

A Shift Elsewhere *Through the Archive*

Antarctica *through* the archive is the specific transposition that I am attending to here. This 'through' can be understood as both the writing down of data observed through experiment and observation, and as *ekphrasis*, in which a work of art is expressed in written language. The elsewhere of Antarctica is both transposed and interpreted in the process of turning it into its archival forms. The resulting artefacts of Wilson's Antarctica of one hundred years ago are found in the form of watercolour paintings, drawings, diaries, tables of scientific observational data and their associated interpretations. I propose that these artefacts can be understood as a kind of ekphrastic dislocation of elsewheres through other media, such as writing, to somewhere else, in this case the archive.

In this chapter, observation is considered in relation to scientific observation. Particular attention is paid to Wilson's efforts as a recorder of meteorological observations during his two expeditions to the Antarctic. I argue that representations of Antarctica, in the particular forms that different modes of observation produce, can be understood as ekphrastic in relation to the site. These ekphrastic representations are then displaced elsewhere, to be gathered as a collection in the archive. This thesis makes an argument for tracing these transpositions through different representational forms in terms of refraction.

I wish to make comparisons between *ekphrasis,* the distorted displacement of *Entstellung*, and Braidotti's transpositions, not to equate them but to read through their differences to see what insights this might generate. My purpose is to develop from this a description of what a refractive interpretation is as applied in the chiastic *ekphrasis* method in this thesis. Refraction describes the crossing of boundaries and the difference between mediums. Braidotti's transposition provides a post-structural analysis of the absences and distortions created through pejoration of race, gender, and natural-others. *Ekphrasis* attends to the relation between art objects and their writing. *Entstellung* attends to the displacements and distortions between unconscious and conscious and provides a method for interpreting the latent within the manifest.

Psychoanalysis is a method for encountering what cannot be faced. It can

be applied to discovering what is disavowed in the archival encounter with heroic polar exploration. The archive can then offer up other possibilities for interpretation, whose meanings are to be found elsewhere, somewhere other than where the manifest content appears to be, and this can be enacted by a further process of interpretation which, in its turn, is also an action of distortion and displacement, a shift elsewhere, *Entstellung*.

Art criticism, as explored by Rendell, is produced through attending to 'sitedness', and its textual production. In keeping with Rendell's approach in *Site-writing,* which integrates spatio-theoretical ideas with psychoanalysis, the following pages explore a temporal and spatial model found in psychoanalytical theories and practices, specifically one of Freud's four processes of dream interpretation: *Entstellung.* 'Through' Rendell writes, is characterised as a practice of writing site that 'involves such a double movement to and fro between inside and outside'.[426] In my thesis, I have taken up Rendell's 'site-writing' in performing the journey to the pole and back again through the pattern of the literary chiasmus. But as regards the role of criticism in this thesis, I am not using writing as a way of generating a response to or criticism of my artwork. What I am arguing for here is employing chiastic ekphrastic structures as a way of organising my argument. Hence I am also questioning what criticism becomes through refraction. My thesis suggests that refraction repositions writing's relation to art practice.

426 Jane Rendell, *Site-Writing,* p. 14.

Fig 3.2

Antarctic Archive 2013 *Ekphrasis*

Antarctic Archive 2012 and 2013 is an archive I have made consisting of copies and reproductions pinned on the wall in a constellation of new arrangements, first in a public library then in a Georgian house overlooking the garden. I collect new pieces for my archive by tearing out a magazine page here, or making a watercolour study of a Wilson painting there, or adding an Alpine postcard from the 1950s next to a copy of the 1911 expedition photo. This combination of incidental and intentional processes for accumulating these elements in the archive is my way of showing the truth of the process that produced this 'archive' when it was in the private working space of my studio and study wall. These elements have been part of the process that I have used for organising my writing, first by making visual analogies between different elements and then by arranging them in a spatial constellation (Figs 3.1, 3.2 & 3.3).

As I re-assemble it as an artwork, I do so in a similar fashion, with a sense of ephemeral contingency, but this time with my viewer in mind. I invite my audience to bring a further interpretative narrative to bear upon the assemblage of fragments. These fragments are multiply refracted, displaced elsewheres through the archive, again refracted through the various media in which the archive elements are produced: a Polaroid photo, the oranges and the yellows of a colour photo print from the 1970s, the fine photo-etching of a Ponting silver glass print for 1908 book publication; the exaggerated colour print separation of a catalogue of medical equipment from 1900s, in their comparisons remind me of the medium of their representation and the *ekphrasis* of the territory into other forms.

Included in *Antarctic Archive* are my pencil copies of the Collotype re-prints of Wilson's panoramas; a photograph from the Web of McMurdo Sound Base; an A4 flyer for an environmental campaign; newspaper articles that memorialise the centenary of the Scott expedition; book pages torn from Lonely Planet tourist guide to Antarctica; a Winsor & Newton watercolour pad endpaper with an orange dash of colour; a cut-through circle that looks like a sun; a 1950s Christmas card in black and white of an Alpine view; a canvas tent in *Camping & Caravanning* magazine; a view of the crater

of Mount Erebus with the print colour strip exposed at the fold; a copy in watercolour of a Wilson painting; a piece of Wondertype carbon paper; architectural domes; photos of the deconstruction of the geodesic dome at the South Pole; and unrealised architectural plans of the 1960s Nervi design for the Museum of Anthropology in Oxford. Colour circles of watercolour are overlaid upon the pencil drawing of topographical features. Cut-through circles frame a piece of paper behind, creating vistas or globes.

Antarctic Archive is set out like a panorama without a single horizon. These many fragmented and multiple horizons undo an illusion of distance, bringing the viewer back to the surface. This archive does not display a single line of an epic narrative but rather it is an accumulation of surface detail and description, with multiple narrative lines traced through the fragments.


Deconstruction of the Dome
WILL THIS WORLD SURVIVE?
the spirit of Scott
12-2012
plorers of today

Fig 3.3

Curious Perspective *Berg off Cape Evans 2013*

On entering the Scott Polar Research Institute on route to the library and archive, the visitor will notice the double-domed hallway, each dome portraying a sky-like polar hemisphere. These painted maps place icy polar caps at the centre, not as some grossly distorted band at the top and bottom of a rectangle, as do most Mercator equatorial aspect projection maps. The commercial graphic map artist and muralist Macdonald Gill painted the ceilings in 1934. Names of renowned explorers encircle the regions in gold. At the centre of each, representing their respective Poles, is a yellow sun-like motif, reminiscent of an oculus that lets in the light and weather through the opening at the top of a dome.

Anamorphism is used in architecture to solve the problem of painting a readable picture upon the interior of a domed ceiling such as this. An anamorphic projection entails a transposition from one grid system onto another, from a square grid onto a circular grid or the concave inner surface of a dome. Coordinates for an anamorphic projection are written as a series of plotted transpositions from position -A- in the standard grid to the correlate position on the distorted grid that will be annotated as -A'-. As a perspectival distortion, anamorphic projections render images comprehensible in one of two ways: by requiring either that the viewer occupy a special viewpoint or that a suitable correcting device intervenes to reflect the image in a recognisable form.

Niceron made the first analysis of anamorphic perspective in his book titled *La Perspective Curieuse* in 1638. At that time, contemporaries of Leonardo da Vinci knew anamorphic perspective as *prospettiva inversa*, that is to say, inverse perspective.[427] Early Renaissance demonstrations of anamorphosis were destabilising to the contemporary understanding of perspectival rules: inverse perspective turned things upside down in a revolutionary sense. But, as Lyle Massey argues in *Picturing Space, Displacing Bodies: Anamorphosis in Early*

427 Lyle Massey, *Picturing Space, Displacing Bodies: Anamorphosis in Early Modern Theories of Perspective* (Pennsylvania: The Pennsylvania State University Press, 2007), p. 39. Hereafter referred to as *Picturing Space, Displacing Bodies*. See also Jurgis Baltrusaitis, *Anamorphic Art* (New York: Henry N. Abrams, 1977).

Modern Theories of Perspective, it is misleading to think of anamorphosis simply as an inverse of perspective, as if it were a symmetrical reflection: a fairer description would be that it is a different order of perspective.[428] Anamorphism provokes a reorientation of the viewing subject that challenges stabilised dichotomies.

Conventional perspective tends to let the sensation of disembodied sovereign vision become naturalised and hence unremarked, whereas anamorphic perspective creates a sensation of strangeness that brings into question the familiarity and naturalness of conventional perspective. In setting up the rigidly fixed point of view necessary to the anamorphic image, attention is drawn to the embodied viewer in a way that does not occur with conventional perspective. It demands that the viewer 'choose between seeing and seeing through, or between visualizing and inhabiting it'.[429] This curious perspective creates a turn away from the notion of window towards the space of the body.

The shift in the kind of subjectivity produced through anamorphism is significant. According to Lyle Massey, the viewer of anamorphic distortion 'cannot escape contingency, temporality, and performativity'.[430] For Massey the consequences of this anamorphic effect extend beyond the realms of the picture, and even beyond what might come under the auspices of the picture and viewer relation. The consequences extend to the status of observation itself, to the 'through' of seeing through, and thus to the medium itself. The anamorphic destabilises the subject/object divide.

I am bringing anamorphism into relation with Braidotti's theory of transposition not to argue that they are the same thing, but to bring a visual analogy into play. The connecting link between them is the transposition of coordinates from A to A'. But, in addition to that, both anamorphism and transposition displace the Cartesian subject. If one were to ask the question 'what does transposition look like?' I suggest that anamorphic images can be explored for answers.

Braidotti has developed transposition as a theory that she credits with a

428 L. Massey, *Picturing Space, Displacing Bodies,* p. 39.

429 L. Massey, *Picturing Space, Displacing Bodies*, p. 45.

430 L. Massey, *Picturing Space, Displacing Bodies*, p. 68.

capacity for combining the objective and subjective. I see this as similar to the conflation of object and subject found in anamorphic perspective. Making reference to both music and genetics, Braidotti's transposition works against corporate identity, the unitary subject, in favour of what she terms the nomadic subject.

> Resting on the assumption of a fundamental and necessary unity between subject and object, the theory of transpositions offers a contemplative and creative stance that respects the visible and hidden complexities of the very phenomena it attempts to study.[431]

It takes into account the implicated role of viewer in the production of those observations, and the role of the viewer for making differences. Braidotti imagines a dynamic spatial arrangement of connection and reconfigurations, often with reference to topologies of mapping and nomadic movement across those mappings. 'Cartographies' is a word frequently used in new materialism to describe the setting out of relations between matter and discourse, and it is one that Braidotti takes up.[432] Van der Tuin and Dolphijn write that Braidotti makes it clear that 'it is important to draw situated cartographies of (new) materialisms, and to traverse these maps at the same time in order to produce visionary alternatives, that is, creative alternatives to critique'.[433]

Although Braidotti's form of new materialism is certainly attentive to the material distinctions and crossovers between matter and meaning, this is more properly the topic of Braidotti's academic and theoretical interest. It does not become a question that she addresses specifically through her *writing* as a material practice, nor one that she approaches with an ekphrastic relation to those objects under discussion. To think transposition through *ekphrasi*s brings attention to the relation between the visual object and writing. In order to engage with the visual, which is an aspect that is underplayed in Braidotti's transpositions, I want to remember the visual practice of mapmaking in the cartographies to which Braidotti refers.

Different forms of representation entail different modes of transposition,

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431 Braidotti, *Transpositions*, p. 6.

432 See Rosi Braidotti, *Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Theory* (New York; Chichester: Columbia University Press, 1994); Rosi Braidotti, *Nomadic Theory: The Portable Rosi Braidotti* (New York: Columbia University Press, 2011).

433 Dolphijn and Van der Tuin, *New Materialism: Interviews & Cartographie*, p. 15.

ekphrasis or *Entstellung*. In addition to this visual sensibility, my argument is that transposition also needs to be thought about together with *Entstellung*. *Entstellung* brings the psychoanalytical dimension to the practice of transposition. I make an application of Braidotti's thinking on transposition to my thinking about the archive. This is also a refractive reading of Braidotti's transpositions through *Entstellung*, and through the visual practice of anamorphic image making, and through the writing of art objects in *ekphrasis*. I am reading them through each other in a refractive reading.

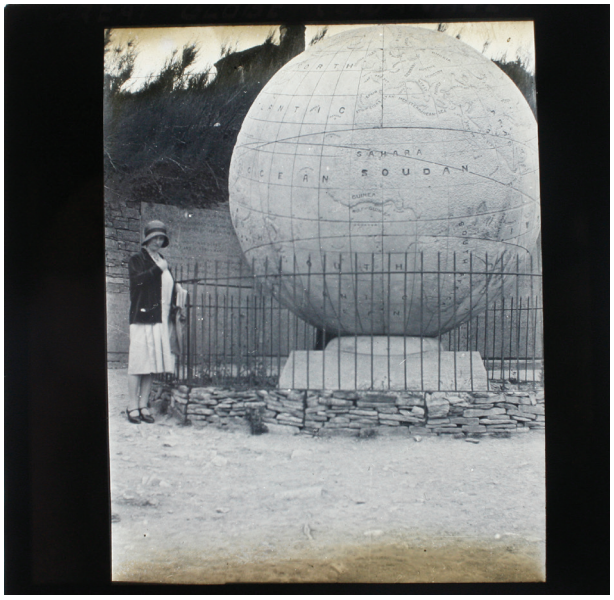

Fig 3.4

The Grid and Globe *Atmosphere*

The transposition from one grid system onto another is found in the making of anamorphic images and the production of maps.[434] Map projections approximate one version of the earth's surface topology onto a grid system. It was the mathematician, astronomer, geographer and mapmaker Ptolemy (150 AD) who introduced the system of a grid to list the then known places in the world.

Lines of latitude and longitude used for describing positions on the surface of the Earth have solved some of the problems of dealing with the spherical globe (Fig 3.4). Practical methods had to follow some centuries later with Renaissance navigation. James Clark Ross (1800–1862) and Alexander Ross Clarke (1828–1914) both contributed to navigation and mapping, one by taking survey measurements 'in the field' and the other by theorising the shape of the world from his 'armchair'.[435] The work of the fieldwork observers and that of the armchair theorists has a recursive relation. Between 1839 and 1843 James Clark Ross circumnavigated Antarctica. Ross collected data by observation and then returned that data home for organisation into models or theories. According to David Pugh, Clark Ross 'established a sea tide gauge benchmark in Tasmania as a datum for scientific mean sea level studies during his voyage of exploration to the Southern Ocean'.[436]

The names of Clark Ross and Ross Clarke happen to form a chiasmus, and in the mode of chiastic *ekphrasis*, their practices of survey and navigation on the one hand, and geodesic calculation on the other, are linked together in an ekphrastic pairing. In the history of Antarctic exploration, the theorists of the geoid have fuelled the pursuit of geometry by setting out the points to be attained for in-the-field explorers and the grids by which the may navigate.[437]

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434 See Cosgrove's description of Ptolemy's second projection in Denis Cosgrove, *Geography and Vision: Seeing, Imagining and Representing the World* (London, New York: I.B. Tauris, 2008), p. 158.

435 See in this thesis the section 'The Archive and the Field' in Chapter One.

436 David Pugh, *Changing Sea Levels: Effects of Tides, Weather and Climate* (Cambridge: Cambridge University Press, 2004), p. 8.

437 Cosgrove, *Geography and Vision: Seeing, Imagining and Representing the World*, p. 21.

These expeditions have in their turn provided observations and empirical evidence by which the geodesic theorists might ground and reference their grids to real-world observable datums, and thereby modify their models.

Clarke determined a figure of the Earth,[438] that is, the shape and size of the Earth for navigation and calculation purposes. He gave his name to the reference ellipsoid geoid named 'Clarke 1866', still in use today. These measurements were dependent upon data collection in the field. As Cosgrove puts it: 'Survey is an embodied process involving direct, sensuous contact with the spaces to be mapped'.[439] Geodesy relies on the establishment of a datum or set of datums,[440] (that is, a set of fixed reference points) from which to gather measurements of the surrounding area. Once a datum is established one has a reference point to make coordinates for mapping longitude, latitude and height that enable the intentional movement from place to place across the Earth's surface on land and sea. It is necessary to know the particular datum of the coordinates under consideration, as an incorrect one can generate mistakes of up to 1km in any direction from one's true position on the surface of the earth.

In map-making, the datum that gives the base point for vertical measurements is taken from sea level. It is an averaged point, calculated over tides and time to give the most accurate figure. It is curious that the fixed point of reference for land is averaged from something that seems to be the epitome of mutability, of ebb and flow, subject to weather variations and instability: the ever-shifting sea. The UK datum for the mapping of vertical heights is taken from the sea level at Newlyn,[441] the same place that British post-impressionists chose for their school of open-air painting. The Ordnance Datum Newlyn was generated from data for the mean sea level at Newlyn between 1915 and 1921.

Datums ought to be arbitrary because in principle the survey should supply the same results whatever the starting point, yet Newlyn was in part chosen for geological reasons, as the granite rock of the pier provided a stable base for the tidal gauge equipment: the instruments used to establish these standards have

438 Alexander Ross Clarke, *Geodesy* (Oxford: Oxford University Press, 1880).

439 Cosgrove, *Geography and Vision*, p. 159.

440 The plural of geodesic datum is datums, unlike the usual plural of datum, which is data.

441 Accessed 10 Sep 2014. Available at http://www.ordnancesurvey.co.uk/benchmarks newlynn

a material reality that needs to be taken into consideration. The consequences for measurements due to the material reality of the spaces and instruments of survey can be read in the Clarke's 1880 textbook, *Geodesy.*[442] Atmospheric refraction is one of these material factors. He says of his formula that it is not 'practically true, as the path of the ray of light passing from horizon to the eye of the observer is not a straight line, but a curved one' owing to the laws of terrestrial refraction.[443]

Clarke also makes descriptions of specific observational practices in which the use of 'stout nails' and 'rods' are detailed. These rods were the standard of measurement, but their material reality needed to be accommodated too. Clarke wrote: 'The measuring rods used in the base measurement were twenty feet in length terminated at either end in copper plates for contact'[444] and 'many experiments were made to determine the expansion of these rods by change of temperature'.[445]

> In the course of the work it became obvious that the rods were affected to such an extent by the variations in humidity in the atmosphere that the measurement was considered a failure. The base was then measured with glass tubes of twenty feet in length, of which the expansions were determined by actual experiment. The temperature of each tube was obtained during the measurement from the readings of two thermometers in contact with it.[446]

Calibrating the instruments used in measurement is not the end of the task in assuring accuracy. Errors must also be anticipated in the steps entailed in the writing down of the figures thus acquired. In addition to the consideration of the interference of the refractive atmosphere and the distortions produced in the instruments of measurement, Clarke, noted 'a curious misprint'[447] in a publication of some data.

There is a process of *ekphrasis* between the observation of the data and the writing of it. I suggest that map making can also be understood as a form of *ekphrasis* in which the transposition, rather than from art object to ekphrastic

442 Clarke, *Geodesy*.
443 Clarke, *Geodesy*, p. B.
444 Clarke, *Geodesy*, p. 11.
445 Clarke, *Geodesy*, p. 7.
446 Clarke, *Geodesy*, p. 14.
447 Clarke, *Geodesy*, p. 8.

writing, is from a visual topography to the inscribed map.

Fig 3.5

Fig 3.6

The Antarctic Manual *Interpretation*

For many centuries there had been a belief in the existence of a southern continent. In his book *Geographica*, Ptolemy proposed its existence and gave it the name Terra Incognita.[448] Cosgrove describes the way that a desire for geometrical perfection was sought out in the anticipated mapping of the earth. 'The Equator became effectively a mirror in which the northern part of the earth was reflected south'.[449] This belief in similarity was carried over into the anticipation that exploration in the Southern Polar regions would entail similar challenges to those undertaken in the Northern regions, with which there had been a much longer history, and therefore for which there were more witness accounts and observations to draw upon. That Antarctic exploration was modelled on Arctic exploration can be deduced from the fact that much of the content of *The Antarctic Manual for the use of the expedition of 1901* was derived from Arctic references.[450]

The Antarctic Manual, like *Notes and Queries* and *Hints to Travellers* (see Chapter One), was an instruction manual concerned with standardising observational practices. It was a 'how to' of Antarctic exploration and scientific observation with prescriptions for gathering scientific data, with many contributions that drew inferences from Arctic experiences. It gave directions for taking observations, including how to calibrate instruments and how to avoid false readings.[451] *The Antarctic Manual* extended to five hundred pages and contained contributions, arranged by section and topic, by specialists in the field, as well as journals from previous polar expeditions spanning the nineteenth century. Earlier data on these southern regions had been limited and so it was necessary to refer back to the *Southern Cross* expedition led by Mr

448 See Carl Murray, 'Mapping Terra Incognita', *Polar Record,* **41**, 2 (2005), 103–12. Murray describes Ptolemy's *Geographica* or *Geography*, written in 150 AD and rediscovered by Europeans in the fifteenth century, as having immense influence upon map making.

449 Cosgrove, *Geography and Vision*, p. 204.

450 *The Antarctic Manual for the use of the expedition of 1901,* ed. by George Murray (London: Royal Geographical Society, 1901), hereafter referred to as *The Antarctic Manual.*

451 *The Antarctic Manual*, pp. 6–197

C.E. Borchgrevink in 1899–1900,[452] and the even earlier circumnavigation of Antarctica by Sir James Clark Ross's in 1841–2.

As is the fate of many instruction manuals rarely to be read in advance, so it was with this one. Wilson noted in his diary ten months into the expedition:

> Spent the day reading the Manual, which I haven't ever had time or opportunity to get through.[453]

It had been issued by the Royal Geographical Society with a preface by Sir Clements Markham and was presented to the expedition. The editor of *The Antarctic Manual*, George Murray, had taken over as Chief of Science from the previous incumbent. In May 1901 the resignation of Dr J.W. Gregory, the first appointed Chief of Science for the Discovery expedition, was reported in the periodical *SCIENCE,* citing differences between the scientific and naval factions: 'Friction and consequent heat became inevitable when the committee proceeded to appoint two leaders – a naval and a scientific – without defining their powers from the outset'.[454] The 'ultimate dispute'[455] was to do with the question of where the ship should land, which Gregory felt should be a matter for science and 'not left entirely to the discretion of an unscientific commander'.[456]

Two months later, the same periodical reported Gregory's subsequent replacement by Dr George Murray, keeper of the Department of Botany at the British Museum and the editor of *The Antarctic Manual*.[457] This article proceeds to reprint the directives written by Sir William Huggins, president of the Royal Society, and Sir Clements Markham, president of the Royal Geographical Society, to Scott as naval commander and to his new Chief of Science, Murray. These instructions stated that both exploration and scientific research should be undertaken and that 'neither of these objects is to be

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452 Royal Society, *National Antarctic Expedition, 1901–1904. Meteorology. Part One* (London: Royal Society, 1908), p. 417 [Part Two published in 1913].

453 Edward Wilson, *Diary of the 'Discovery' Expedition to the Antarctic Regions 1901–1904*, p. 147.

454 'The British Antarctic Expedition', *SCIENCE,* **13**, 334 (1901), p. 836 <http://www.jstor.org/stable/1628546> [18 Dec 2014].

455 'The British Antarctic Expedition', *SCIENCE,* **13**, 334 p. 836.

456 'The British Antarctic Expedition', *SCIENCE*, **13**, 334 p. 836.

457 'The British National Antarctic Expedition', *SCIENCE*, **14**, 342 (1901), pp. 94–100. <http://www.jstor.org/stable/1627872> [18 Dec 2014].

sacrificed to the other'.[458] Although these instructions might not have been entirely fit for avoiding a replay of the conflict, they did emphatically counsel the 'harmonious working and hearty cooperation'[459] upon which the success of the expedition depended.

The presidents then made a personal entreaty to Scott's diligence, writing that 'the greatest importance is attached to the series of magnetic observations to be taken under your superintendence and we desire that you will spare no pains to ensure their accuracy and continuity'.[460] In these instructions, the prerequisites for the carrying out of magnetic observations are itemised, followed by a long paragraph describing the magnetic observatory's careful construction and separation from the distorting influence of steel or iron.[461]

The Antarctic Manual also included detailed practical advice to support the taking of accurate observations:

> The observer's cap (particularly if of fur) and his woollen clothing, and even his hair if not completely covered by his cap, will be apt in the Antarctic climate to become electrified by the slightest friction, as so to give false results when the object to be observed is atmospheric electricity.[462]

The role of *The Antarctic Manual* was partly to enable the team to set up the proper arrangements for making accurate observations. The interference of the observer's hat in atmospheric readings, as in the quote above, and the personal antipathies between science and naval cohorts described in the pages of *SCIENCE* in 1901,[463] are all among the factors creating distortions to observations. As well as calibrating the mechanical instruments, it was necessary to cajole and calibrate the human personalities involved too.

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458 'The British National Antarctic Expedition', *SCIENCE*, **14**, 342 p. 95.

459 'The British National Antarctic Expedition', *SCIENCE*, **14**, 342 p. 95.

460 'The British National Antarctic Expedition', *SCIENCE*, **14**, 342 p. 96.

461 'The British National Antarctic Expedition', *SCIENCE*, **14**, 342 p. 95.

462 *The Antarctic Manual*, p. 69.

463 See 'The British Antarctic Expedition', *SCIENCE*, **13**, 334 and 'The British National Antarctic Expedition', *SCIENCE*, **14,** 342**.**

Fig 3.7

Fig 3.8

Observation Hill *The Observer and Observed*

The question of landing, which had caused such rupture between the first Chief of Science and the naval command, was later to be answered in the selection of MacMurdo Sound for setting up the 1901–1904 British Antarctic Expedition base. Wilson comments in his diary on 8 February 1902 on the qualities of the bay area, which was at that point tantalisingly just beyond reach, 'the wrong side of a small point of land'[464] as they waited for sea ice to melt to allow their passage:

> As things are at present we are in a safe place, but at the same time just not in the most perfect little natural harbour imaginable. We all realized our extreme good fortune in being led to such a winter quarter as this.[465]

Some of the features of this winter quarter included the provision of natural shelter protected from prevailing winds, the mitigation of sea ice pressure provided by the peninsula, bare rock to build the huts upon, and the accessibility to exposed rock areas fit for geologising.[466]

The location was also aesthetically pleasing. It was within sight of the dramatic active volcano Mount Erebus and the Transantarctic Mountain Range, and Observation Hill, a peaked volcanic hill of 230 metres, useless for fossils, as 'everything is ash and cinder' (Figs 3.7 & 3.8).[467]

> Sun 9 Feb –Barne and I went up to the top of Observation Hill, and it was a very grand sight that we saw. Erebus with its column of smoke, and Terror beyond all under the snow and crevassed with perfect maze of cracks on every side. Between them and us a very prominent rock, Castle Rock, stands up black out of the snowy plateau, 1400ft. Below us (we are 700 ft. up on a conical volcanic hill top) lies the hinterland of the Great Ice Barrier, its edge breaking off into what we can now no longer call a bay but McMurdo Strait, for the ice sheet runs away to the south as far as the [eye] can see.[468]

During the *Discovery* expedition thermometers were installed in various locations to aid meteorological observations. According to the author of a South Polar Times contribution on meteorology 'One of these thermometers

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464 Wilson, *Diary of the 'Discovery'*, p. 112.

465 Wilson, *Diary of the 'Discovery'*, p. 112.

466 Wilson, *Diary of the 'Discovery'*, p. 112.

467 Wilson, *Diary of the 'Discovery'*, p. 114.

468 Wilson, *Diary of the 'Discovery'*, p. 113. The type reads 'edge', but I assume this is mistranscribed.

was placed on Crater Hill, 960 feet above sea level and was called the High Level Observatory'.[469] Other thermometers were placed in the observation huts established on the ice floe next to the ship. In Wilson's *Discovery* diary there are numerous references to Crater Hill and the walks to the top that he and another fellow would make to take meteorological observations.[470]

Each member of the crew was obliged to do stints of two-hourly barometer readings, and the temperature of the hut, the temperature of the air by dry and wet bulb, of the snow, of the earth, of snowfall, aurora, parhelion, corona, wind direction and force. Wilson had been an active taker of observations, the programme of which he described as an 'altogether a most exhaustive detailed record of everything to do with the climate',[471] and often detailed in his diary the trouble that he and his fellows encountered while gathering data:

> Sat 3 May 1902- After taking the 12 o'clock observations I lay down in my clothes and slumbered. I did the same after the 2a.m. and 4 a.m. and then read, as I had to be out again to change the paper on a recording drum at 5, a cold job which you can't do in gloves and the metal burns your fingers all the while you are fiddling at it. I have had white fingers more than once over the little job. The metal feels exactly as though it were red-hot. Between 5 and 6 I had some cocoa and a feed of pressed beef and bread and marmalade and at 6 a.m. took screen observations again and turned in at half past. As usual, for we all experience the same result, I woke with a very bad headache and lay in bed till one o'clock.[472]

Common trials included the instruments getting full of drift snow,[473] parts of them freezing up, the contact with the body of the burning cold of the metal parts of the recording meteorological instruments, since this could remove skin in an instant,[474] hurricane lamps getting blown out, and the sometimes extremely difficult walk to the observation huts that entailed dragging oneself along guide ropes in blinding blizzards in which one could lose sight of the

469 Louis Bernacchi, 'Meteorology' *South Polar Times*, Vol. 2, Part VI [April to August 1903] (London: Smith, Elder, & Co., 1907), p. 6. Louis Bernacchi was the meteorologist and probable contributor of this article.

470 Wilson, *Diary of the 'Discovery'*, p. 133.

471 Wilson, *Diary of the 'Discovery'*, pp. 133–34.

472 Wilson, *Diary of the 'Discovery'*, p. 139.

473 Wilson, *Diary of the 'Discovery'*, p. 169.

474 Wilson, *Diary of the 'Discovery'*, p. 167.

ship when only ten feet from it.[475]

Aside from these trials, there were pleasures to be had in the course of taking observations. Wilson noted in his diary the intermittent aesthetic benefits that these duties provided.

> Friday 28 March 1902 – Beautiful sunrise at 6 a.m. Rosy glow all over the range of mountains and pink and blue sky. These are the occasional reward one has for taking the meteorological observations.[476]

Crater Hill's neighbour, Observation Hill, offered a picturesque scenic landscape, and was the subject of many of Wilson's watercolour paintings. One of the earliest views is *Observation Hill from the foot of Crater Hill. Looking south-west, mid-day, 29 January 1903*[477] in which the details of time and orientation are noted. Another Wilson watercolour, *Observation Hill 1901–04,*[478] has a striking turquoise green blue sky with a view of the peak behind a foreground outcrop feature, but is non-specific in its date and timing, apart from identifying it with Wilson's first expedition some time between 1901 and 1904. *Observation Hill and White Island, April 25. 1903,*[479] pictures pale yellow and peachy streaks of clouds and mid-blue background. In a pencil drawing by Wilson of Observation Hill in the album of pencil sketches, the textual description is slanted like layers of geological strata (Fig 3.9).[480] On Wilson's return to the Antarctic with the *Terra Nova* expedition in 1910, he made further studies of this feature, for example, *Observation Hill from Hut Point Apr. 9.11 6pm*.[481] Purple, picturesque, accomplished, it begins a clutch of April 1911 paintings. *Observation Hill, Apr.10.11. 5pm*[482] has a pink glow on

475 Wilson, *Diary of the 'Discovery'*, p. 163.

476 Wilson, *Diary of the 'Discovery'*, p. 128.

477 Wilson, *Observation Hill from the foot of Crater Hill* (watercolour on paper, 30.2 x 20.4 cm), SPRI N:1280. (Looking south-west, mid-day, 29 January 1903).

478 Wilson, *Observation Hill* (watercolour on paper, 20.4 x 12 cm), SPRI N:1283 [1901–04].

479 Wilson, *Observation Hill and White Island. April 25. 1903* (watercolour on paper), SPRI N:523.

480 Wilson *Observation Hill* (pencil on paper, 25.5 x 20.2 cm – album page 36.5 x 26.5 cm) Vol. II: Landscapes, analytical drawings of ice crystals and earth formations, with explanatory notes. SPRI N:1802/45.

481 Wilson, *Observation Hill from Hut Point. Apr. 9.11. 6pm.* (watercolour on paper), Cheltenham Art Gallery and Museum: The Wilson, Cheltenham, Accession number: 1930.65

482 Wilson, *Observation Hill, Apr. 10.11. 5pm.* (watercolour on paper, 21.2 x 13.2 cm), SPRI N:408.

the horizon. *Observation Hill from Fodder Depot. April 14. 1911. 2pm*[483] shows the hill to the right of picture and icebergs floating in a dark blue ocean. All these paintings are dated around the last days of summer prior to the long winter night of 1910–1911. Although these paintings were executed in close succession, they are now separated in different archives, kept across the country from one another.

I would argue that Wilson's annotated sketches were, in fact, another form of weather observation. Observation Hill combines the artistic and the scientific practices of observation, becoming sometimes a position from which to view the surrounding territory and at other times the object of observation. One set of observations were taken with a thermometer and written down as data sets of degrees Fahrenheit, the other set of observations were taken with a pencil and paper and later transposed into finished watercolours. I consider Observation Hill as an instrument, to be an extension of the subject in his thrice-weekly walks to the top, weather permitting, to take meteorological observations. On the other hand, Observation Hill can be understood as the object of observation in the scenic landscape paintings with colour-washed atmospheres of peachy orange and blues, annotated with notes on time and date. Observation Hill presents an opportunity to take note of a chiastic exchange in its doubled and connected existence as both object of observation and position from which to take observations.

483 Wilson, *Observation Hill from Fodder Depot. April 14. 1911. 2pm* (watercolour on paper, 21 x 13.2 cm), SPRI N:486.

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Fig 3.9

Next Fig 3.10

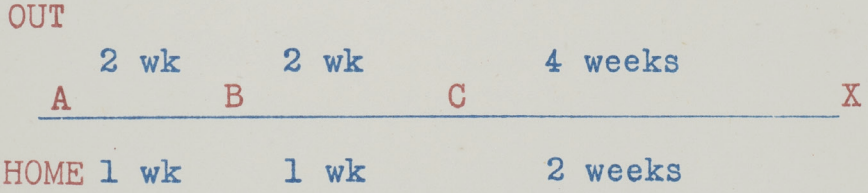
these averages would take 137 days.

TRANSPORT (1) MEN:-

As regards transport "the safest plan must depend on the performance of the 2nd and 3rd Stages of the journey by men alone.....Calculation on this basis and with Shackleton's data brings us within view of the Pole, but only by employing three units of men."

"How can the distance travelled by Shackleton with four men be exceeded by employing a greater number."

"Let us suppose that we start at the bottom of the Glacier with 3 units of men, each dragging 7 weeks food, or 21 food units in all."



At B the first party turns back. It will have consumed by return 3 units of food.

At C the second party turns back. It will have consumed 6 units.

At X[18] the last party turns back. It will have consumed 12 units.

The Southern Journey *The South Pole*

On the *Discovery* expedition, Hut Point became the location of their expedition base and Observation Hill gained its name as the vantage point for spotting the returning polar parties.[484] The territory of Antarctica was won by adding degrees latitude south to previous attempts. On Wilson's first return from the attempt on the pole during the *Discovery* expedition, his diary recounts the joyous sighting of a meeting party coming out to greet them after their thirteen weeks away.[485] During the *Discovery* expedition in 1902 Wilson, Scott and Shackleton reached 82° 17' S on the Ross Ice Shelf. Wilson wrote 'Tues 30 Dec Tomorrow, whatever happens, we must turn north again, our furthest southern point being 82°17'S'.[486] The entry in Wilson's diary on Tues 3 February 1903, describes the moment when he, Scott and Shackleton saw Observation Hill on their return from this polar journey: 'all the home landmarks well in sight' and 'the greatest pleasure in seeing two figures hurrying towards us on ski'.[487] Shackleton later furthered this southernmost achievement in 1909. He had extended the reach south by another 6 degrees to 88°23'S 162°E, just 97 nautical miles from the pole, in the *Nimrod* expedition that he led in 1907–1909.

On the *Terra Nova* expedition of 1910–1913, Cape Evans became the site for the expedition base on Antarctica. The base was where the expedition made its home for planning these journeys and where the expedition crew would spend the winter months. Once the base was established, there followed a summer season during which depots were laid towards the pole ready for the polar journey in the following summer season. The journey to the pole was marked by the following depots: Safety Camp, Motor Corner Camp, Bluff Depot, One Ton Camp, Upper Barrier Depot, Middle Barrier Depot, Lower

484 See 'Natural History Museum. Nature Plus. Blog by Diana' <http://www.nhm.ac.uk/natureplus/community/antarctic-conservation/blog/2010/09/29/hiking-observation-hill?fromGateway=true> [1 May 2014]. See also Abraham Padilla, 'Carpe Cervisiam, Chronicles of an Antarctic Adventure', <http://ajpadilla.wordpress.com/2013/04/19/observation-hill/> [2 June 2015].

485 Wilson, *Diary of the 'Discovery'*, p. 244.

486 Wilson, *Diary of the 'Discovery'*, p. 230.

487 Wilson, *Diary of the 'Discovery'*, p. 244.

Barrier Depot, Lower Glacier Depot, Middle Glacier Depot, Upper Glacier Depot, 3 Degree Depot, 1½ Degree Depot, Last Depot, South Pole.[488] Depots were staging posts on the journey where stores would be put down. This meant that the sledging party to the South Pole would not have to carry all the provisions with them, but on the way out could pick the up those provisions that had been laid down in the previous season. It also functioned as a store for provisions for use on their return leg of the journey so to avoid carrying unnecessary weight.

On 8 May 1911, in preparation for his attempt on the Pole, Scott gave a lecture in the hut at Cape Evans, as to 'the future plans of the expedition', which Scott then wrote up for inclusion in the *South Polar Times* as 'The Southern Journey 1911–1912'.[489] Scott wrote that he would take 'Shackleton's journey as a basis from which the performance of this distance can be calculated'.[490] Scott methodically analysed the number of ponies used, the quantity of rations consumed, and the distances covered by Shackleton and his team, and from this data he projected a plan for his own effort.

The transcript of the lecture was reproduced in the *South Polar Times*, [491] set out with blue type and red headings (Fig 3.10).[492]

OUT

2 wk 2 wk 4 weeks

A B C X

HOME1 wk 1 wk 2 weeks

At B the first party turns back. It will have consumed by return 3 units of food.

At C the second party turns back. It will have consumed 6 units.

At X[18] the last party turns back. It will have consumed 12 units.

488 See the map produced by Apsley Cherry-Garrard of 'The Polar Journey' detailing the depots. Reproduced in Seaver, *Edward Wilson of the Antarctic*, between pp. 268 and 269.

489 Robert Falcon Scott 'The Southern Journey 1911–1912', *South Polar Times,* Vol. 3, Part 1, pp. 24–32.

490 Scott, 'The Southern Journey 1911–1912', *South Polar Times*, p. 24.

491 Scott, 'The Southern Journey 1911–1912', *South Polar Times*, p. 24.

492 Scott, 'The Southern Journey 1911–1912', *South Polar Times*, p. 27.

The footnote for 'X', added by Apsley Cherry-Garrard as editor of the facsimile version on its publication in 1914, reads:

> 'X' is, of course, an unknown point – the 'furthest South' to be reached, if possible the Pole itself.[493]

On the map that Cherry-Garrard subsequently drew of the Southern Journey to the South Pole, the 'unknown point' 'furthest South' reached was the Pole and is marked with a cross (Fig 3.11).

493 'Footnotes', *South Polar Times,* Vol. 3, p. 154.

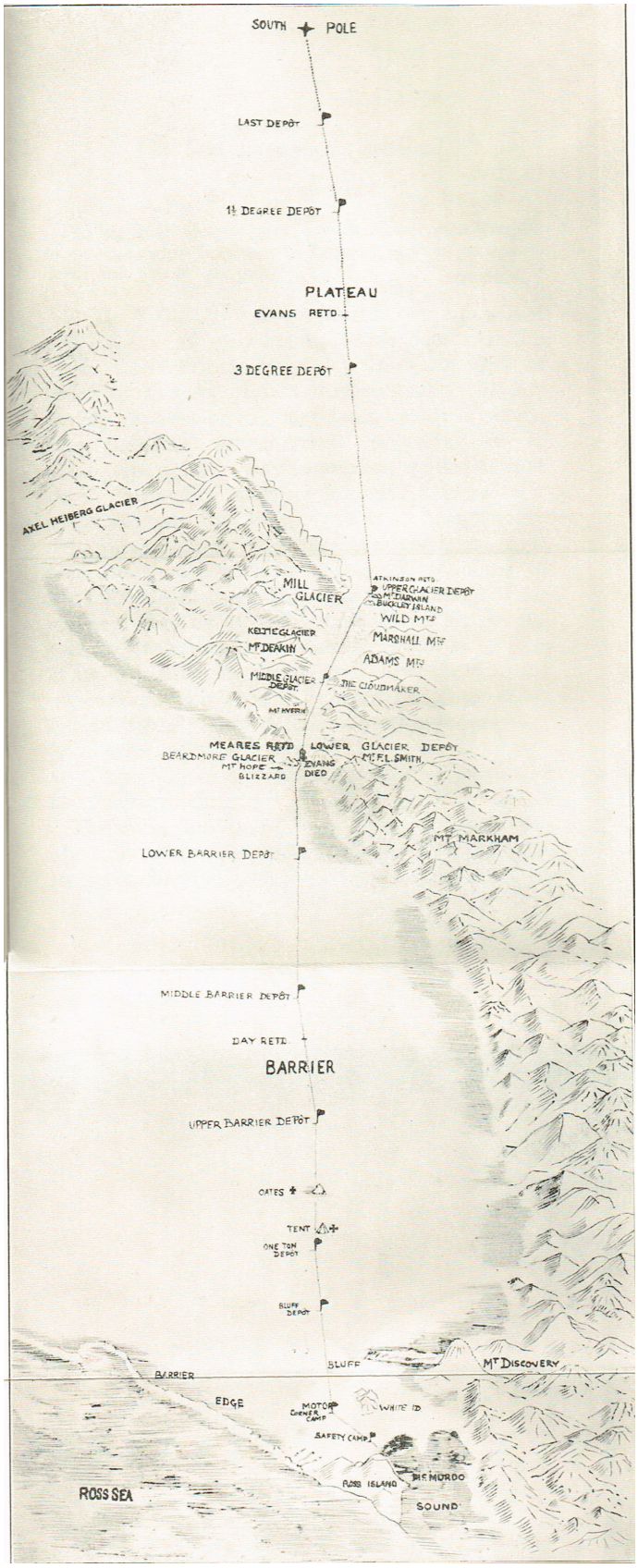

SOUTH POLE
LAST DEPOT
1½ DEGREE DEPOT
PLATEAU
EVANS RETD
3 DEGREE DEPOT
AXEL HEIBERG GLACIER
MILL GLACIER
ATKINSON RETD
UPPER GLACIER DEPOT
MEARSHAN
BUCKLEY ISLAND
WILD MTS
MARSHALL MTS
ADAMS MTS
KELTIE GLACIER
MT DEAKIN
MIDDLE GLACIER DEPOT
THE CLOUDMAKER
MT NYERIK
MEARES RETD
LOWER GLACIER DEPOT
BEARDMORE GLACIER
MT HOPE
BLIZZARD
EVANS
DIED
MT F.L. SMITH
MT MARKHAM
LOWER BARRIER DEPOT
MIDDLE BARRIER DEPOT
DAY RETD
BARRIER
UPPER BARRIER DEPOT
OATES
TENT
ONE TON DEPOT
BLUFF DEPOT
BLUFF
MT DISCOVERY
BARRIER EDGE
MOTOR
CREW'S CAMP
WHITE ID
SAFETY CAMP
ROSS ISLAND
MCMURDO SOUND
ROSS SEA

Fig 3.11

X

Similar to the structure of a polar journey, a literary chiasmus is found in those texts where the second half repeats the first half in reverse order, written as A-B-C-X-C'-B'-A'.[494] The name chiasmus is derived from the name for the Greek letter for 'X'. The social anthropologist, Mary Douglas, refers to the chiasmus as a ring composition that consists of parallelisms that return to the beginning:

> The minimum criterion for a ring composition is for the ending to join up with the beginning […] There has to be a well-marked point at which the ring turns, preparatory to working back to the beginning, and the whole series of stanzas from the beginning to the middle should be in parallel with the other series going from the middle back to the start.[495]

Douglas writes that often chiasmi are used to create emphasis, the most important area being the central lines where the meaning is weighted. Douglas describes it as a form found worldwide but one that is difficult for westerners to recognise.[496] The chiasmus is frequently found in the bible and oral traditions. In a ring composition a different temporality can be presented, one that is not based upon linear narrative, but rather upon recursive time. The terms 'literary chiasmus' and 'ring composition' refer to the same general pattern, but the ring composition is an extended version of this over a long narrative, whereas chiastic structure can describe the pattern within just a few words of a sentence. Douglas writes:

> It is called either *inclusio*, emphasizing the bracketing into one unit of everything from the start to the end, or *chiasmus*, emphasizing the inverted word order.[497]

Ring structures, both parts of which are intended to be read together, are built out of parallelism, 'because it covers similar or antithetical situations'[498] and these pairs are placed opposite each other, not side by side in the text. 'The

494 Mary Douglas, *Thinking in Circles: An Essay on Ring Composition*, (New Haven: Yale University Press, 2007), p. 2.

495 Douglas, *Thinking in Circles: An Essay on Ring Composition*, pp. 1–2.

496 Douglas, *Thinking in Circles: An Essay on Ring Composition*, p. x.

497 Douglas, *Thinking in Circles: An Essay on Ring Composition*, p. 2.

498 Douglas, *Thinking in Circles: An Essay on Ring Composition*, p. 6.

structure is chiastic: it depends on the "crossing over" or change of direction of the movement at the middle point'.[499]

She goes on to say that, 'a reader who reads a ring as if it were a straight linear composition will miss the meaning'.[500] The stories of Noah's Ark and the Iliad have a chiastic structure.[501] The chiasmus is therefore especially suited to epic stories of homecoming. I argue that the Southern Journey can be understood as an epic story of homecoming, like many of the examples of oral or ancient storytelling that share the form, such as the Iliad. Its progress is plotted along an outward A, B, C path, turning at X and then returning via the same depots some time later C', B', A'. The progress and return of the Southern Journey is plotted in a mathematical-like transformation.

I would like to argue that the difference between the first meeting with A and the second meeting with A' can be understood in terms of a 'transposition'. I am taking my definition of transposition here from Braidotti, who describes it as 'an intertextual, cross boundary or transversal transfer, in the sense of a leap from one code to another'.[502] Braidotti, referring to both music and genetics, models transposition as the genetic leap between codes.

A genetic chiasma is the point at which a chromosome pair exchange DNA. This takes place during the sexual reproductive phase of genetic material recombination. The genetic crossover of information allows for organisms to evolve, and ensures the generation of differences. Braidotti writes through what she calls the 'axis of transposition or becoming-other'.[503] These axes are situated along lines of gender, race or animal-natural others. I wish to pose a connection rather than a conflation between the chiasmus in the literary form and Braidotti's use of transposition that she links to the genetic chiasma. This connection is important for me to make so that I can describe the specific characteristics of the chiastic *ekphrasis* and refractive interpretation that I intend in this thesis, and to distinguish the specific form of literary chiasmus as

499 Douglas, *Thinking in Circles: An Essay on Ring Composition*, p. 6.

500 Douglas, *Thinking in Circles: An Essay on Ring Composition*, p. x.

501 William E Engel, *Chiastic Designs in English Literature from Sidney to Shakespeare* (Farnham: Ashgate, 2009).

502 Braidotti, *Transpositions*, p. 5.

503 Braidotti, *Transpositions*, p. 96.

chiastic ekphrasis from other types of literary chiasmus.

In their introduction to the edited volume *Chiasmus and Culture*,[504] Boris Wiseman and Anthony Paul refer to the 'somewhat shadowy and far from distinguished status of this figure within traditional rhetoric',[505] but argue that a chiastic structure is associated with other conceptual values; that it is not just a formal device based upon a literary inversion.[506] They point to the lack of significant change in the assessment of chiasmus, which misses the main point in failing to go beyond its description as 'a local decorative literary effect'.[507] They note that this formal kind of criticism fails, 'one might say, to participate in the spirit of chiastic inversion and allow the questioner to be questioned by his own object of attention'.[508] They go on to describe the contradictory nature of the chiasmus as both 'diagram and force', 'system and movement'.[509] The chiasmus, in their view is both structural and temporal, 'in one sense' it is a 'pattern or structure' and in another sense it is 'a process of change'.[510]

In terms of the typology of the chiasmus, they say that 'it is variously figured as an X, as a mirroring, as a circle and as a spiral'.[511] Not all chiastic structures are productive of difference. For example, in the circle, they say, 'there is movement but no escape'[512] but the final example in their typology is the spiral which:

> represents the power of chiasmus to embrace paradox and contradiction in an enlarging and possibly unending process which opens possibilities of transcending the ordinary constraints of our understanding of reality.[513]

It is, I suggest, this spiral form of the chiasmus that is the version that allows for the refractive cross-readings that I propose here.

I argue that the Southern Journey can be interpreted as this spiral form of

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504 Anthony Paul and Boris Wiseman, 'Chiasmus in the Drama of Life', in *Chiasmus and Culture*, ed. by Anthony Paul and Boris Wiseman (New York, Oxford: Bergbahn, 2014), pp. 1–15.

505 Paul and Wiseman, 'Chiasmus in the Drama of Life', p. 1.

506 Paul and Wiseman, 'Chiasmus in the Drama of Life', p. 1.

507 Paul and Wiseman, 'Chiasmus in the Drama of Life', p. 1.

508 Paul and Wiseman, 'Chiasmus in the Drama of Life', p. 2.

509 Paul and Wiseman, 'Chiasmus in the Drama of Life', p. 5.

510 Paul and Wiseman, 'Chiasmus in the Drama of Life', p. 4.

511 Paul and Wiseman, 'Chiasmus in the Drama of Life', p. 8.

512 Paul and Wiseman, 'Chiasmus in the Drama of Life', p. 8.

513 Paul and Wiseman, 'Chiasmus in the Drama of Life', p. 9.

the chiasmus. The revisiting of A as A' creates a parallelism as the depots are returned to but under different times and conditions. The 'X' in the Southern Journey was designated as the destination to which Scott's polar party arrived only to find Amundsen's tent there already, and that they had arrived too late (Fig 3.12). The 'X' in the Southern Journey marked the destination and it also marked the point at which they turned back.

I also propose that Braidotti's 'transposition' can be taken up and interpreted and performed as a form of narrative in writing, one that entails the spirit of the chiasmus, but which can engage with chiastic resonances across other disciplines, not only the biological–evolutionary, but also the literary. I would suggest that the chiasmus in its spiral form produces repetition with a difference so creating a generative pattern. It is, then, I argue, the chiasmus, in its spiral form, that can provide a literary form for performing Braidotti's philosophical transposition in writing.

What we should visualise when we imagine the spiral form of the chiasmus is not the figure X – this merely represents the turning point – but the spiral form of a movement, the passage of which passes through A, B, C, and then turns at X, creating a circular movement that returns without repeating to C', B' and A'. In my refractive interpretations this chiastic crossover X marks the turning point. It is the quality of the turn that I characterise as a refractive shift between mediums. Therefore X is not figured as the destination, but can be better figured as the turn, as the crossing of the boundary. In refraction this difference in crossing at a boundary would be measured as the refractive index that determines the subsequent trajectory of the refracted line and therefore the transposition of A to A'. X then is better understood as the axis of transposition.

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Fig 3.12

According to Cosgrove, the geographic poles are only there by virtue of a mathematical projection. It was the pursuit of geometry that produced the requirement for expeditions to and exploration of the Poles. In *Geography and Vision*, Cosgrove describes the likes of Scott and Amundsen as engaged in: 'suicidal treks designed to demonstrate elemental symmetries in oceanic space or to reach the poles – those global locations with no material existence, geometrical and geodesic points that even resist plotting with precision'.[514] Scott wrote: 'The Norwegians have forestalled us and are first to the Pole'.[515] The photo taken by Bowers shows the polar team in disarray as they examine Amundsen's tent and Norwegian flag (Fig 3.12). This image of the explorers at the South Pole was to be found after lying 'latent' in the undeveloped films discovered with their bodies.[516]

Those more recent explorers who journey to the interior of Antarctica to the ultimate destination of the South Pole find that there are two poles at the South Pole: a geographical south pole marker and another 'Ceremonial South Pole', at a short walk's distance to the side. The Ceremonial South Pole was set up specifically for photo opportunities while the Geographic South Pole is moved yearly to allow for the 10-metre annual ice sheet drift that displaces it. The short walk between these two positions is comparable to the shift between perspectives that occurs in anamorphosis, or the double outlook required for binocular vision. This binocular vision has within it the same principle of one grid system transposed upon another that offers the experience of an embodied three-dimensional space.

Binocular vision is produced by the fact that the seeing human body has two eyes and each one sees a slightly different view. The optical chiasma is a structure formed where the optic nerves from the two eyes partially cross over. Both sides of the brain receive images from both eyes, enabling binocular

514 Cosgrove, *Geography and Vision*, p. 23.

515 Robert Falcon Scott, ed. by Leonard Huxley, *Scott's Last Expedition, in Two Volumes: Vol. 1 Being the Journals of Captain R. F. Scott, R. N., C. V. O.,* (London: Smith, Elder & Co., 1913), p. 375 Diary entry dated Tuesday, 16 January 1912.

516 Ponting, *The Great White South* (New York: Robert M. McBride and Co., 1922), p. 290.

vision in animals. The optical chiasma then can be thought of as the fleshly place where the world and inner reality meet. Some of the optical information from the retina of each eye passes via the optic nerve over to the opposite side of the brain at the crossover point known as the chiasma.

Matz Larsson, writing in the *Frontiers of Zoology*, has suggested that the development of sight in humans is related to the need for close hand manipulation and this bilateral crossing from one side to the other through the optical chiasma has come about because of the human being's development in which eye and hand have been the combined determining factors of human vision.[517] The evolutionary development of human sight occurred in close tandem with that of hand's capacity for movement and manipulation.[518] This version of vision is not a disembodied vision but one that reaches out to grasp and simultaneously anticipates the reciprocal touch of the external world. In reaching for the paintbrush or pencil, the artist in the act of drawing and painting is engaging this 'optical chiasmus'.

Wilson made a little pencil sketch in his diary of the tent at the South Pole. I suggest that had he and his team got to the South Pole first there would have been nothing yet for him to draw. I do not only mean that there would have been no tent or flag, but that the South Pole's transition from an abstraction into a location required first that someone arrive there and identify it as such by making a mark.

The act of drawing has also always been an embodied practice.

> From its inception, perspective was predicated on the principle that the hand must provide a translation from eye to image […] conversion of the visible into the visual was always dependent on the body as mediator.[519]

This is not the disembodied overview from the outside, but an on-the-ground embodied and experiential view. The South Pole was only an abstract geodesic point in anticipation; on arrival it turned into a place.

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517 Matz Larsson, 'The Optic Chiasm: A Turning Point in the Evolution of Eye/Hand Coordination', *Frontiers in Zoology,* **10,** 41 (2013), pp. 1–5, p. 2.

518 Larsson, 'The Optic Chiasm: A Turning Point in the Evolution of Eye/Hand Coordination', p. 2.

519 L. Massey, *Picturing Space, Displacing Bodies*, p. 72

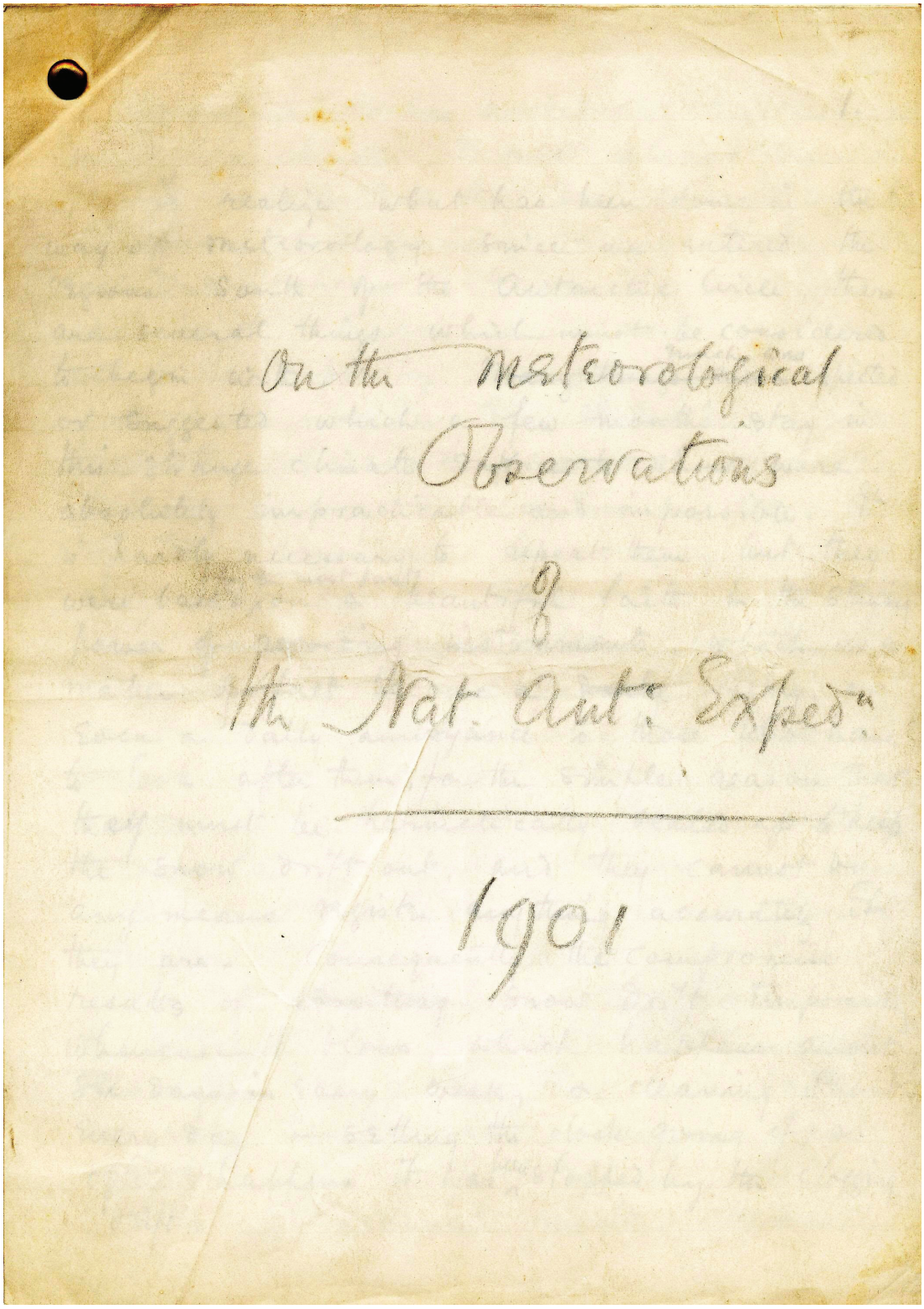
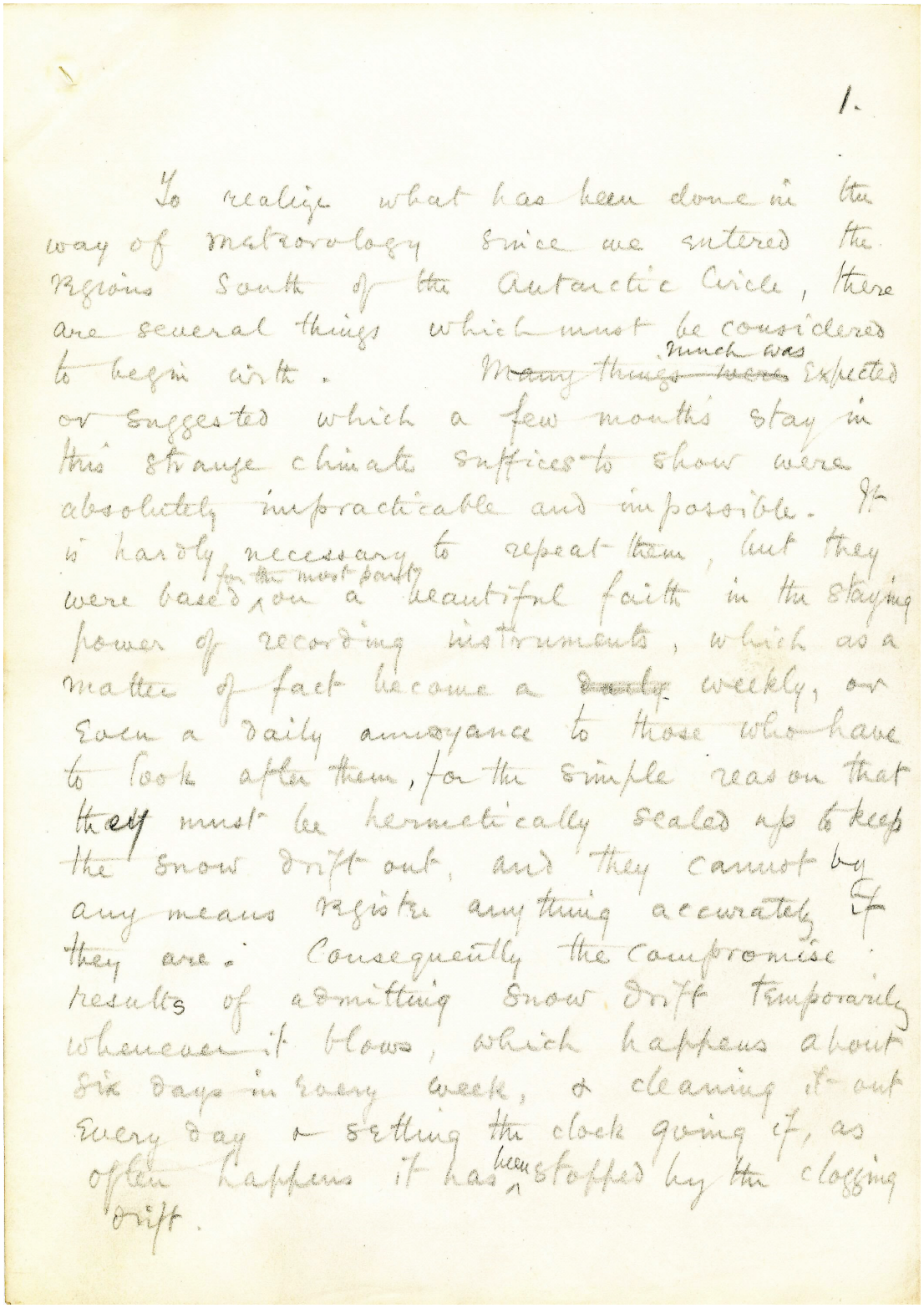

On the Meteorological
Observations
of
the Nat. Aut. Exped.
1901

Fig 3.13a



1.

To realize what has been done in the way of meteorology since we entered the Regions South of the Antarctic Circle, there are several things which must be considered to begin with. Many things ~~have been~~ much was expected or suggested which a few months stay in this strange climate suffices to show were absolutely impracticable and impossible. It is hardly necessary to repeat them, but they were based for the most part on a beautiful faith in the staying power of recording instruments, which as a matter of fact become a ~~daily~~ weekly, or even a daily annoyance to those who have to look after them, for the simple reason that they must be hermetically sealed up to keep the snow drift out, and they cannot by any means register anything accurately if they are. Consequently the compromise results of admitting Snow Drift temporarily whenever it blows, which happens about six days in every week, & cleaning it out every day & setting the clock going if, as often happens it has been stopped by the clogging drift.

Fig 3.13b

Observation Hill The Observer and Observed

> The line between object and subject is not fixed and does not preexist the particular practices of their engagement, but neither is it arbitrary. Rather, object and subject emerge through and as part of the specific nature of the material practices that are enacted.[520]

Karen Barad explains that 'Objects are not already there; they emerge through specific practices'.[521] According to her take on observation, it is the 'instrument-apparatus' of observation that makes the distinction between observer and observed, and in her terms 'enacts the cut'.[522] This 'cut' is not inherent in that which is observed. Barad recognises observation as a process in which observer and observed are inseparable. What distinguishes them, or what 'enacts the cut' between them, is dependent upon the overall apparatus of the observation. The apparatus in Barad's terminology does not only refer to the limited notion of instrument, but to the entire set up, including the observer. According to Barad, observer and observed are mutually produced through this observation-apparatus. Dolphijn and Van der Tuin describe Barad's work as showing how 'the so-called subject, the so-called instrument, and the so-called object of research are always already entangled, and how measurements are the entanglement of matter and meaning'.[523]

As an example of this in 'The boundaries of an apparatus, or "ceci n'est pas une cigar"' Barad recounts an anecdote about early experiments to ascertain the orientation of electron orbits made during the early twentieth century. The ambition of these experiments was to decide between the new understanding based on quantum theory and the old classical view of Newtonian physics.[524] The Stern-Gerlach experiment was designed to test the premise that different atoms have orbits at variance to each other. The experiment exploited the atoms' magnetic charge by using magnets to deflect the atoms off course. A test was devised to show that 'the beam of silver atoms passing through the

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520 Barad, *Meeting the Universe Halfway,* p. 359.

521 Barad, *Meeting the Universe Halfway,* p. 157.

522 Barad, *Meeting the Universe Halfway*, p. 328.

523 Dolphijn and Van der Tuin, *New Materialism: Interviews & Cartographies*, p. 15.

524 Barad, *Meeting the Universe Halfway*, p. 161.

external field created by the magnets would split in two leaving two separate traces on the detecting screen, which was a glass plate'.[525] According to Barad, when Gerlach viewed the plate he could see no mark, but when he passed it to Stern, who brought the plate close to his face as he peered at it, the trace of the beam appeared.[526] Stern recalled:

> my breath on the plate turned silver into silver sulfide, which is jet black, so easily visible. It was like developing a photographic film.[527]

Stern and Gerlach realised that Stern's breath had been a factor in producing the appearance of the trace, as his habit of smoking cheap cigars had resulted in sulphuric breath that reacted with the silver particles. Barad shows that the sulphuric breath on the plate is productive of an inscriptive tracing of silver marks, and was implicated in the practice of observation.

In many ways, the changeable place of this 'cut' between observer and observed was made quite noticeable in making meteorological observation in Antarctica. Wilson wrote the following in some notes titled *On the Meteorological Observations of National Antarctic Expedition of 1901*: (Fig 3.13)[528] 'To anyone who has worked with these instruments in such a climate it must always seem like a perfect miracle that they keep going at all'.[529] His comments focus upon the gap between the anticipated practice of observation and the reality: 'Much was expected or suggested which a few month's stay in this strange climate suffices to show were absolutely impracticable and impossible'.[530] Wilson attributes this impossibility to be mostly due to:

> a beautiful faith in the staying power of recording instruments, which as a matter of fact become a weekly, or even a daily annoyance to those who have to look after them, for the simple reason that they must be hermetically sealed up to keep the snow drift out, and they cannot by any means register anything accurately if they are.[531]

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525 Barad, *Meeting the Universe Halfway*, p. 163.

526 Barad, *Meeting the Universe Halfway*, p. 165.

527 Bretislav Friedrich and Dudley Herschbech, 'Space Quantization: Otto Stern's Lucky Star', *Daedelus,* **127** (1998), pp. 165–191, p. 179. Also cited in Barad, *Meeting the Universe Halfway*, p. 164

528 Dundee, Dundee Heritage Trust (DHT), Edward Wilson, *On the Meteorological Observations of the Antarctic Expedition* 1901, pencil on paper. Accession: DUNIH 2009.83, pp. 1–18.

529 DHT: Accession: DUNIH 2009.83, p. 2.

530 DHT: Accession: DUNIH 2009.83, p. 1.

531 DHT: Accession: DUNIH 2009.83, p. 1.

These instruments were disrupted by the same climate that they were intended to observe, and, in protecting them from the intrusion of that climate into their workings, the instruments were made ineffective in registering the intended observation.

> Much ingenuity will be required to overcome the difficulties to continuous records of observations in these climates that have been touched upon. The greatest drawback is certainly the snowdrift, which is as hard to deal with as coal dust. It gets in wherever air can enter and clogs up all machinery without mercy. It moreover clogs the pens, and forms a protecting coat to the sensitive parts of instruments & to the bulbs of the thermometers which prevents them from feeling and registering any change except in a hopelessly sluggish manner. It vitiates the hygrographs in a similar manner, & blocks the openings in Dine's ingenious Anemometer. Nothing is safe from its all pervading presence, and in future expeditions there is much scope for new ideas to circumvent it. It is the meteorologist's bugbear in the Southern Polar Regions.[532]

Snowdrift is identified as the prime problem and likened to the coal dust of polluted cities in its invasiveness. In addition to this, the relation of writing to observation is suggested in the problems caused to the part of the instrument that is meant to register a legible mark, which is also subject to interference: 'the snow makes lumps on the fountain pen & produces a smudge instead of a line'.[533]

Some indication of the way that the *Discovery* crew felt about their observational duties can be gleaned from a contribution from a poem written by Fitz Clarence aka M: Barnes 2nd Lieutenant, titled *Observations*.[534] The fourth verse laments the anticipated lack of interest of the Meteorological Office as it allows the hard-won data to languish in a 'pigeon hole' gathering 'year on year the dust of ages'.[535] The poem addresses the 'scientific gentlemen a-sitting safe at home' in their armchairs, entreating then to be tolerant of inaccuracies of observations that 'wander from the groove' and reiterating the importance of writing in the process of observation: 'to take true observations,

532 DHT: Accession: DUNIH 2009.83, pp. 17–18.

533 DHT: Accession: DUNIH 2009.83, pp. 7–8.

534 Michael Barne, 'Observations', *South Polar Times*, Vol. 1, part 1, ed. by Robert Falcon Scott, Ernest Schackleton, Louis Bernacchi (London: Smith, Elder, & Co., 1907), pp. 21–22.

535 M. Barne, 'Observations', p. 22.

you must write down what you see'.[536] The same point is made in an informative essay on how observations were taken featured in a later volume of the *South Polar Times*. The essay passed on:

> the excellent advice given by all authorities, namely that of 'accuracy, regularity, and honesty in taking any observation' and to write down what you actually see, and not what you think it ought to be.[537]

The opinion that observation requires both clear sightedness and the proper effort in documenting what has been observed was clearly commonly held amongst the crew.

So the further requirement in making observations was to turn the collected data into writing. The process by which observations are registered by some kind of effect or mark, such as the tracing of silver atoms, and then interpreted through writing, is a process of refractive shifts: they both entail a form of *ekphrasis*. We can think of this understanding of observation with a refractive interpretation. What then is required is not the misguided notion of an easy separation between observer and observed but a refractive interpretation of how the shifts occur between the readable traces of observation, and again from that to the written interpretations of those marks and measurements.

536 M. Barne, 'Observations', p. 22.

537 Louis Bernacchi, 'Meteorology' in *South Polar Times*, Vol. 2, part VI, ed. by Louis Bernacchi (London: Smith, Elder, & Co., 1907), pp. 3–8, pp. 3–4.

Fig 3.14

Fig 3.15

Freud claimed that psychoanalysis was a science by affirming that it was a theory based upon observation.[538] Yet the status of psychoanalysis as a science is contentious. In the case of psychoanalysis, the instrument of observation is also the matter under observation. In *An Outline of Psycho-Analysis* Freud writes that:

> Every science is based upon observations and experiences arrived at through the medium of our psychical apparatus. But since *our* science has as its subject that apparatus itself, the analogy ends here. We make our observations through the medium of the same perceptual apparatus, precisely with the help of the breaks in the sequence of 'psychical' events: we fill in what is omitted by making plausible inferences and translating it into conscious material.[539]

In fact psychoanalysis presents challenges to ideas of interpretation and observation and the relation between them, which subsequently also challenge some of the foundations of scientific methodology, and therefore its truth claims. Freud brings an attentive eye to the unconscious motivations behind our interpretations.[540]

Unconscious material is distorted in the process of being turned into the dream (Figs 3.13, 3.14.& 3.15). In being interpreted, the dream undergoes another distortion in bringing it again to consciousness. What is required is that distorted manifest content of the dream must once again undergo a distortion in order interpret the latent and unconscious content. Freud pre-empts possible criticism of his method by affirming that this is only what the dream has already undergone. Freud argues that the dream has already undergone a process of repression first, and later denial. Repression deforms the memory under several layers. These deformations might be omissions, 'lacunae, chronological disorder, or unintelligibility'.[541] These 'gaps' and

538 Sigmund Freud, 'An Outline of Psycho-Analysis', in *Moses and Monotheism, An Outline of Psycho-Analysis and Other Works*, standard edn, Vol. 23, ed. and trans. by James Strachey (London: Vintage, 2001), p. 159

539 Sigmund Freud, 'An Outline of Psycho-Analysis', *Moses and Monotheism*, p. 159

540 Freud, *Interpreting Dreams*, pp. 136–44.

541 Solal Rabinovitch, 'Entstellung', in *Dictionary of Untranslatables: A Philosophical Lexicon,* ed. by Barbara Cassin, Emily Apter, Michael Wood (Princeton: Princeton University Press, 2014), pp. 268–69, p. 269.

'omissions' are where the interpretative translations of psychoanalysis take place.

As much as observation is key to psychoanalytic method, central to some of the cornerstones of psychoanalytic theory are the narratives of the failure to observe, the failure to see what is before one's eyes or disavowal of that which is observed. Psychoanalysis can account for the way that perception must also deal with the psychic interference of disavowal; what is plain to see may also be invisible to the subject in denial or repression. The castration complex is produced out of the failure to observe sexual difference.[542] In this thesis, a Freudian understanding of displacement and distortion in *Entstellung* is applied in order to take note of the psychological aspect of repression and denial at work in the failure to observe.

Weber argues that Freud does not set up observation against speculation 'in the name of an immediacy of perception, a notion that everything in psychoanalysis would tend to exclude'.[543] Weber suggests that Freud is rethinking 'the possibility of a new conception of "science"'[544] in which the comprehension of the both observer and observed as being full of 'gaps' that are in need of interpretative translation 'would play a constitutive part'.[545] Weber concludes that:

> The problem, then, becomes that of specifying the relation between observation, on the one hand, and interpretation on the other.[546]

Ekphrasis is a matter of interpretation. If the turning of a visual object into words is the definition of *ekphrasis* then this transposition most closely resembles the analysand's narration of the dream images; but on either side of that ekphrastic shift are two other interpretations: the shift from the unconscious to the production of dream images, and the analyst's interpretation of the analysand's *ekphrasis* of those dream images (Figure 3.16).

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542 Sigmund Freud, 'The Infantile Genital Organization: An Interpolation into the Theory of Sexuality', in *The Ego and the Id and Other Works*, Vol. 19, ed. and trans. by James Strachey (London: Vintage, 2001), p. 141–48.

543 Samuel Weber, 'Observation, Description, Figurative Language', in *The Legend of Freud* (Stanford: Stanford University Press, 2000), pp. 50–66, p. 55.

544 Weber, *The Legend of Freud*, pp. 55–56.

545 Weber, *The Legend of Freud*, p. 56.

546 Weber, *The Legend of Freud*, p. 55.

Fig 3.16

Fig 3.17

The data collected during the 1901–1904 National Antarctic Expedition was published in a number of volumes. Those observations relating to meteorology filled two volumes, the first part being produced under the superintendence of W.N. Shaw, the Director of the Meteorological Office.[547] *Meteorology, Part One*[548] contained the explanatory notes describing what came under each column heading in the table of observations. Mostly these consisted of tabulated figures, but the last and broadest column was reserved for the 'description of phenomena which it was not possible to tabulate'.[549]

It is this column that I propose we might reserve for atmosphere, not as a set of measurable data, but as an aesthetic concept. In *Atmosphere as Fundamental Concept of a New Aesthetics*, the German philosopher Gernot Böhme explores the relation between subject and object as a comingling:

> The new aesthetics is a theory of perception, which is liberated from its reduction to information processing, provision of data or (re)cognition of a situation. Perception includes the affective impact of the observed, the 'reality of images', corporeality. Perception is basically the manner in which one is bodily present for something or someone or one's bodily state in the environment. The primary 'object' of perception is atmospheres.[550]

Although Böhme calls this aesthetics 'new', he seems to have forgotten or overlooked the kind of insights that psychoanalysis has provided for the last one hundred years. If the very foundations of the truth claims of empirical science can be shaken by Freudian psychoanalysis then aesthetics certainly cannot be any more secure. Freud had already made much headway with the provision of a new method by which to try to accommodate 'description of phenomena which it is not possible to tabulate'.[551] I suggest that we therefore remember Freud's interpretative method as we consider the description that

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547 Royal Society, *Meteorology/ National Antarctic Expedition 1901-1904*, Part One, ed. by W. N Shaw (London: Royal Society, 1908) and Royal Society, *Meteorology, National Antarctic Expedition 1902–1904*, Part Two (London: Royal Society, 1913).

548 Royal Society, *Meteorology/ National Antarctic Expedition, 1901–1904*, Part One, p. 4.

549 Royal Society *Meteorology/ National Antarctic Expedition, 1901–1904*, Part One, p. 4.

550 Gernot Böhme, 'Atmosphere as the Fundamental Concept of a New Aesthetic', *Thesis Eleven,* **36** (1993), pp. 113–26, p. 125.

551 Royal Society, *Meteorology/ National Antarctic Expedition, 1901–1904*, Part One, p. 4.

Böhme gives of atmospheres.

Böhme begins by describing the ubiquitous but indeterminate notion of atmosphere:

> Atmospheres are indeterminate above all as regards their ontological status. We are not sure whether we should attribute them to the objects or environments from which they proceed or to the subjects who experience them. We are also unsure where they are. They seem to fill the space with a certain tone of feeling like a haze.[552]

Böhme says that for atmosphere to become a usable concept, we must first account for this 'peculiar intermediary status of atmospheres between subject and object'.[553] This new aesthetics will account for the relation between environmental qualities and human states. It is this mediating in-between that Böhme refers to as atmosphere.[554]

In *Fur eine ökologische Naturästhetik*,[555] Böhme proposes approaching aesthetics via the portal of ecology. According to Böhme, to do this opens aesthetics up for a different encounter to that of the traditional theories of aesthetics such as those of Immanuel Kant, Theodor Adorno, and Jean-François Lyotard. Böhme characterises traditional aesthetics as dominated by questions of judgement, which have led, in his opinion, to the dominance of language and semiotic theory. Böhme refers to Nelson Goodman's *Languages of Art* as an example that implies that literature can take precedence over other kinds of art while also providing a 'schema' or measure for interpreting art.[556] But, Böhme asserts, works of art do not always mean something, and they do not always intend to communicate, certainly not in the same way as written language, which does not imply that they cannot be interpreted as such, but that a written interpretation of an art work can result in 'cutting out or even denying the experience of the presence of the represented, namely the atmosphere of the painting'.[557]

I appreciate the suggestion that Böhme makes, that we can think in terms

552 Böhme, 'Atmosphere as the Fundamental Concept of a New Aesthetic', p. 114.

553 Böhme, 'Atmosphere as the Fundamental Concept of a New Aesthetic', p. 114.

554 Böhme, *Atmosphäre* (Suhrkamp: Frankfurt am Main, 1995).

555 Böhme, *Fur eine ökologische Naturästhetik* (Frankfurt: Suhrkamp, 1989).

556 Böhme, 'Atmosphere as the Fundamental Concept of a New Aesthetic', p. 115.

557 Böhme, 'Atmosphere as the Fundamental Concept of a New Aesthetic', p. 115.

of atmospheres with regard to artworks and also the way in which this can set up corollaries with ecology which can link subject and object, observer and observed in a implicated whole. But in contrast to characterising language as only on the side of the schemas of judgement, I suggest that language can also be poetic and that it can function in relation to art in a way that is not critically interpretative. And we must also remember all that Freud has offered us in countering any notion of language as a transparent tool which can be applied to the task of observation without any consideration of the gaps and distortions of which it is itself made up, or in ignorance of the transpositions that the interpretations perform.

I suggest that in *ekphrasis* language can relate to art in a way that is itself, in fact, more atmospheric and refractive. By this I mean that language and artworks can be set side by side as mediums with differences, and that the refractive crossing over between them is marked by a non-hierarchical passage between different densities.

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Fig 3.18

Fig 3.19

As I look at Wilson's watercolours online, in sequences of fragmented sections, or go to the archives and leaf through the archive boxes of painted watercolour papers, I want to allow the images they depict to return to a three-dimensional reality. In the archive, I searched out a number of views of Wilson's Observation Hill. They were made at different times of year and day, cast in different colour atmospheres. I have a panorama in mind: a panorama that surrounds the horizon of vision in a full 360-degree sweep, that becomes a temporal experience by demanding that the viewer play a moving role, at the very least, make a turn of the head, or at the most have a walking encounter with the spectacle.[558]

I took as references four watercolours of the same view with differing colouring and paired each with another Wilson landscape to create the material to copy into one of my inverted panoramas (Figs 3.17 & 3.18 & 3.19). The panoramas I created are not real or true to the topography of the landscape, but they fit aesthetically, as I have put them together for reasons of composition or colour. My mirrored spheres are anamorphic devices that reflect my painted copies of Wilson's watercolours. I realise that if the globe were to be mirrored all over then the reflection in its surface would encompass everything, not just the painted surface on which it rests, but everything above it too. So, I decide to create a false sky, to blot out the intrusion of the ceiling upon the illusion. I decide that the globes are to be made of glass, continuous glass made of two hemispheres; silvered below and with an opaque coloured glass above. I find a glass blower who can make the globes.

On the glass globes there is a 'horizon line' at the equator where the opaque and transparent glass meet. I silver the interior of the globes in a chemical process of washing, keying the surface with a tinning agent, then swilling measured quantities of the silver nitrate solution over it. The dark shadow of the thin layer of silvering gradually becomes brighter as more of the silver is deposited. I pour out the waste solution, allow the globe to dry, then seal it with a varnish to protect it from tarnishing.

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558 Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*, p. 113.

The plate glass that I intend to paint upon has to be sandblasted to create a surface to which the watercolour will 'take'. This creates a rough surface that fractures the light reflection into multiple different directions, fragmenting the surface into a matt glow. I attempt to use a mathematical calculation to translate the Wilson painting onto the flat painted surface of the glass on which the globe will rest but I find I prefer working by eye. In this way the transposition from one grid to another in the anamorphic projection is still active, but it is produced through practice rather than by calculation. I realise that it is a mistake to think of the anamorphic image as derived from a linear production. If I think of it that way then I *have* to *know* the calculation in order to produce the anamorphic image. The linear sequence is as follows: begin with the Wilson painting; grid it and mark coordinates, with an anamorphic calculation sufficient for the correcting device of a globe; transpose the second grid; transpose the coordinates of the first grid onto the second grid, then paint the image accordingly; place the mirrored globe on the painted second grid; look into the globe and see the anamorphic image. This linear sequence starts with the Wilson painting and ends with its anamorphic image. In practice the anamorphic image is derived from a circular production in which the Wilson painting and the anamorphic image are next to each other. Thinking of it like this turns the previous linear sequence into a circle. I copy the Wilson original as I want it to appear in the mirrored reflection as an anamorphic image. I have to get used to an odd disassociation of hand and eye as I paint by looking into the reflection in the mirror rather than directly at the surface on which the paint is applied.

I paint versions of Wilson's watercolours, combined as circular anamorphic panoramas, on the sandblasted glass (Figs 3.20 & 3.21). These distorted views correct themselves when reflected in the mirrored hand-blown glass spheres. These anamorphic landscapes are produced by the introduction of a reflective device, the half-silvered globe, rather than by a fixed viewing point. Hence they invite a movement around and between them. When encountered at the optimum angle and distance, the glass globes present an enclosed miniature world, but as the viewer moves around them they find that the illusion falters. The globes consist of opaque coloured glass above the horizon line, and transparent mirrored glass below the horizon line. There is a further horizon

within the reflected image of the painted landscape's horizon, and another horizon that intrudes into the anamorphic illusion when the angle of viewing is too low; this is the edge the plinth.

Fig 3.20

Fig 3.21

Ekphrasis is also a kind of transposition, which occurs through a change in mediums, such as occurs in representing a landscape first through painting then through writing. W.J.T. Mitchell points out that the ekphrastic exchange is a three-way movement, not a binary one; it is not just between 'speaking/seeing subject and seen object' but is 'also typically the offering of this expression to the reader'.[559] Mitchell footnotes this point with the following comment:

> One might think of the psychoanalytic process of dream interpretation as the staging of the ekphrastic scene in which the manifest visual content of the dream is the ekphrastic object, the analysand is the ekphrastic speaker, and the analyst is the reader/interpreter.[560]

In *Ekphrasis and the Other*, Mitchell gives a typology of *ekphrasis*: hopeful, fearful and indifferent *ekphrasis*. Hopeful *ekphrasis*, he identifies as the 'overcoming of otherness'.[561] He further discusses *ekphrasis* in 'The Politics of Genre: Space and Time in Lessing's *Laocoon*',[562] referring to Lessing's *Laocoon: An Essay on the Limits of Painting and Poetry*, in which Lessing argued for the distinct domains of painting and poetry, and that they should not try to emulate each other. According to Mitchell: 'Lessing's originality was his systematic treatment of the space-time question, his reduction of the generic boundaries of the arts to this fundamental difference'.[563]

The most often cited example of *ekphrasis* is of Achilles' shield in the Iliad. Mitchell notes, with regards to criticism of the Iliad – what would have been a horror to Lessing– the increasing dominance of the *ekphrastic*, in which what was once seen as a minor part of the poem, the descriptive excursion or decorative detail, has come to dominate critical interpretations. In this excessive focus on the ekphrastic passage in the Iliad, Mitchell says that:

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559 W.J.T Mitchell, 'Ekphrasis and the Other', in *Picture Theory: Essays on Verbal and Visual Representation*, pp. 151–182, p. 164.

560 Mitchell, 'Ekphrasis and the Other', p. 164, footnote 35.

561 Mitchell, 'Ekphrasis and the Other', p. 156.

562 W.J.T Mitchell, 'The Politics of Genre: Space and Time in Lessing's *Laocoon*', *Representations,* **6**, Spring (1984) <http://www.jstor.org/stable/2928540) > [accessed 24 June 2015] pp. 98–115.

563 Mitchell, 'The Politics of Genre: Space and Time in Lessing's *Laocoon*', p. 98.

> The relation of epic to ekphrasis is turned inside out: the entire action of the Iliad becomes a fragment of the totalizing vision provided by Achilles' shield.[564]

The Iliad is a story of an epic journey of homecoming, as is the polar adventure. The Iliad is also patterned as a literary ring or chiasmus.

> But ekphrastic ornament is a kind of foreign body within epic that threatens to reverse the natural literary priorities of time over space, narrative over description, and turn the sublimities of epic over to the flattering blandishments of epideictic rhetoric.[565]

Just as the ekphrastic moment of the description of the shield displaces the epic narrative telos of the Iliad, so do I intend that the writing here should produce a series of displacements of the narrative of Antarctic heroism.

These ekphrastic episodes are meant, as Mitchell calls it, to become the other, the difference within the writing. Mitchell explains that it is in the three versions of hopeful, fearful and indifferent *ekphrasis*, that ambivalence about difference is played out. In *ekphrasis* we find that the verbal/visual binary of dominance is demonstrated in language's relation to the visible–dumb object of observation, and this is enacted through the black–white binaries of race, and around visibility and speech, and around gender as seeing and being seen. Similarly, Braidotti finds through the axes of the natural–animal other – the ekphrastic dumb object of observation – of gender, and of race her 'axis of transposition or becoming-other'.[566]

Mitchell says that 'the limits' in Lessing's title would have been better translated as 'borders' between painting and poetry, and in the essay there can be interpreted a concern for other border crossings. In what I would describes as an application of a Freudian psychoanalytical method of dream interpretation, *Entstellung*, Mitchell uncovers in Lessing a concern for wandering which at bottom is a concern with 'proper sex roles':[567]

> Once we have glimpsed the link between genre and gender, however, it seems to make itself felt throughout all the oppositions that regulate Lessing's discourse.

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564 Mitchell, 'Ekphrasis and the Other', p. 180.

565 Mitchell, 'Ekphrasis and the Other', p. 179.

566 Braidotti, *Transpositions*, p. 96.

567 Mitchell, 'The Politics of Genre: Space and Time in Lessing's *Laocoon*', p. 108.

Mitchell supplies a table in which these oppositions are listed, including the following: Space/Time, Imitation/Expression, Body/Mind, Feminine/Masculine. This opposition, Mitchell says, can be further typified in contrasts between 'blurred genres' and 'distinct genres'.[568]

And again, in keeping with Freud's method of seeking to interpret the gaps, Mitchell makes a link to an omission in Lessing's writing. Lessing, Mitchell notices, does not mention:

> his own father, who wrote a Latin thesis at Wittenberg entitled de non commutando sexus habitus – 'on the impropriety, that is, of women wearing men's clothes and men wearing women's'.[569]

The cross-dresser is uncovered as the repressed other that Lessing's prohibitive 'border control' discourse on the difference between painting and literature seeks to repress. In Freudian terms, the original process of *Entstellung* comes about as a result of the covering up or denial of sexual difference. In the dream interpretation tracing the shifts and deformation of the marks of *Entstellung* can lead back or forward to the latent and hidden content. Underneath Lessing's treatise on *Ekphrasis* is the border-crossing practice of 'women wearing men's clothes' and vice versa.

So I suggest that *ekphrasis* can be posed as a form of encounter between differences. This form of the writing can produce an anamorphic effect that is in contrast to the effect of perspective as window. In other words, in an *ekphrasis*, writing becomes a process that does not seek to close but rather to decentre and dislocate as it proceeds. This is what it has in common with the anamorphic image. This chiastic *ekphrasis* performs an anamorphic distortion upon the territory under observation. This form of writing about the art object entails what I would call an anamorphic writing in contrast to the form of academic writing that seems to propose itself as transparent window onto to that which is under observation.

> If the window provides an analogy for the centred Cartesian subject who surveys the world as picture, anamorphosis turns this illusion inside out,

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568 Mitchell, 'The Politics of Genre: Space and Time in Lessing's *Laocoon*', p. 109.

569 Mitchell, 'The Politics of Genre: Space and Time in Lessing's *Laocoon*', p, 109. Mitchell says that he owes this remarkable fact to Gombrich's 'Lessing', 146–47. See Ernst Gombrich, 'Lessing: Lecture on a Master Mind', from the Proceedings of the British Academy, Vol. XLIII (London: Oxford University Press, 1958), pp. 133–56, pp. 146–47.

> forcing the viewer to see perspectival space as a fiction of geometry and to see the pictorial surface as an object that stares back.[570]

Academic writing, as Weber characterises it, shows a desire for closure.[571] My take on it is that this definition of academic writing is too narrow, and that there are other modes possible. Writing, after all, is itself a learnt physical practice that, as we have seen, comes out of the chiastic evolution of hand and eye coordination. The kind of writing that I propose in chiastic *ekphrasis* and a refractive method, does not deliver a compacted argument but is performative in its process of deferral to elsewhere. Refraction repositions writing's relation to art practice elsewhere.

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570 L. Massey, *Picturing Space, Displacing Bodies*, p. 68.

571 Simon Morgan Wortham and Gary Hall, 'Experimenting', in *Experimenting: Essays with Samuel Weber*, ed. by Simon Morgan Wortham and Gary Hall (New York: Fordham University Press, 2007), pp. 1–12, p. 3.

TABLE 78. REGISTER OF FIRST RELIEF (DOG SLEDGE) PARTY, HUT POINT TO ONE TON CAMP AND BACK.

FEBRUARY 26TH TO MARCH 16TH, 1912.

Observer: A. CHERRY-GARRARD.

Time.		Position.	Barometer (Aneroid) Uncorrected.	Dry Bulb Temp.	Wind.		Weather (Beaufort Notation).	Cloud.		Remarks.
Day.	Hour.				Direction (True).	Force (0–12).		Amount (0–10).	Kind.	
FEBRUARY, 1912.			Inches.	° F.						
26	8.30	Hut Point	29·40	0·5	S 50 E	3	o.c.	10	—	Low drift all way from Hut Point. Clearing a bit at intervals, then thick again.
,,	11.30	Biscuit Depot (15 miles from Hut Point)	29·42	1·5	S 50 E	3-4	o.c.	10	—	Rather more drift and wind, all land obscured. Some blue patches of sky.
,,	17	,,	29·36	−2·0	E	1-2	o.c.	10	—	Wind has gradually died down. Still thick to S., but clear over Hut Point.
,,	23	Corner Camp	29·26	−4·7	SSW	1	o.c.	10	—	Thick to SE and E. Top of mountains covered, but foot-hills visible.
27	Noon	,,	29·25	−2·5	SSE	2-3	o.c.	7	Ci.-St.	Mountains and Bluff clear. On W of Erebus looked as if there was a wind blowing to Cape Evans, with drift.
,,	17.15	10 miles from Corner Camp	29·23	−4·0	SSE	3	o.c.	9	St.	Parts of foot-hills and all Bluff and White Island visible, the rest obscured. Same appearance of wind on lower SW slopes of Erebus, though part of foot of Erebus and all peninsula are otherwise clear. Very dark, open water sky behind.
,,	21.5	—	29·20	—	SSE	5	o.c.	10	St.	Blizzard started suddenly. Everything was obscured except a blue strip on southern horizon, out of which came the blizzard in the form of a cloud of drift. There seemed to be no cloud travelling with the drift.
28	8.15	—	29·29	−11·5	SE	3-4	o.c.	10	—	Mild blizzard blowing.
,,	16.15	—	29·37	−5·5	SE	1	o.c.	9	St.	
,,	20.30	—	29·36	−13·5	Light S Airs	—	b.c.	4	St.	Clear overhead to S. Overcast over Erebus and Terror. Western Mountains also clear.
,,	23.30	—	29·41	−21·5	Light N Airs	—	b.c.	3	St.	Clear overhead to S. Overcast over Erebus and Terror. Western Mountains also clear.
29	10.30	—	29·47	−16·5	Light N Airs	—	b.c.	4	St.	All day very black over White Island and Sound. Lower slopes of Erebus clear, and now cloud is spreading over to Bluff, all of which part has been clear all day, and also to S. 20 h.: upper clouds from NW.
,,	13.30	—	29·40	−11·0	N	2	o.c.	5	St.	
,,	20	Bluff Depot (79° S)	29·36	−19·0	N	3	o.c.	7	St., Ci.-St	
MARCH, 1912.										
1	11.15	—	29·29	−1·5	Calm	0	o.c.	5	Ci.-St.	The Western Mountains and Ross Island in cloud all day, otherwise clear till about 15 h., when everything became overcast from N very quickly.
,,	20.45	—	29·14	−13·0	NW	2	o.c.	9	Ci.-St.	Now sun breaking through at intervals.
2	6.30	—	29·12	−23·7	NW	4	o.	9	Ci.-St.	This morning it was overcast and blowing a mild blizzard from NW. Now at 14 h. it is clearing to W and S; otherwise it is still thick.

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Fig 3.22

The second volume of Meteorological Observations from the first British Antarctic Expedition 1901–1904 with *Discovery,* was not published until 1913. The following 1915 review was written in the knowledge of the polar party deaths:

> No one can turn over the pages of this important volume without being impressed by the enormous labor involved in its preparation, and without a feeling of gratitude to all the faithful observers who, often in peril and usually in discomfort, made the series of records which are here collected and summarized so that all of us may make use of them, quietly, conveniently and in safety, in the study, the library or the classroom.[572]

The meteorological observations from the *Terra Nova* British Antarctic Expedition 1910–1913 expedition, made under the supervision of the expedition's meteorologist, George Simpson, were not published until 1923. Amongst those pages of over 600 tables of weather data is the 'Table 78 Register of the First Relief (Dog Sledge) Party, Hut Point to One Ton Camp and Back February 26th to March 16th, 1912' as observed by Apsley Cherry-Garrard[573] (Fig 3.22). As with all the other tables, this table notes time, day and hour, position, barometer, dry bulb temperature in Fahrenheit, the wind direction and force, Beaufort notation for weather, and amount and kind of cloud, with a broad column for remarks. But what is not tabulated or remarked upon in this table is the narrative of the larger purpose of this First Relief (Dog Sledge) Party. According to Cherry-Garrard, their purpose was to 'hurry Scott and this companions home so they might be in time to catch the ship if possible'.[574] Cherry-Garrard and Dimitri Gerov arrived at One Ton Depot on 3 March 1912, waited for as long as provisions allowed and then started the return to Hut Point one week later. On the 21 March only eleven miles from One Ton Depot, the last three surviving men of the polar party pitched their

572 R. Dec. Ward, 'Reviewed Work: National Antarctic Expedition, 1901–1904', *Bulletin of the American Geographical Society*, **47**, 2. (1915), pp. 138–39.

573 'Table 78. Register of the First Relief (Dog Sledge) Party, Hut Point to One Ton Camp and Back February 26th to March 16th, 1912, Observer: A. Cherry-Garrard', *British Antarctic Expedition 1910–1913, Meteorology Volume III Tables*, ed. by G. C.Simpson (Harrison and Sons: London, 1923), pp. 675–78.

574 Cherry-Garrard, *The Worst Journey in the World*, p. 425.

tent for the last time.[575]

Once all hope was gone for the polar party's safe return the remaining men, exhausted and sombre, settled down for another winter in the hut. Cherry-Garrard wrote that 'the first thing which we settled about the winter that lay ahead of us was that, so far as possible, everything should go on as usual'.[576] This included the taking of meteorological observations.

The National Centre for Earth Observations is a UK-based organisation that takes all kind of measurements of the Earth, including atmospheric and meteorological effects. It is, they say, their 'mission to unlock the full potential of Earth observation data', 'monitor global and regional changes', and 'to learn more about the Earth system and improve predictions of future environmental conditions'.[577] The aim listed as their fourth mission statement is:

> To provide reliable information and tools that will enable the government, business and citizens to manage the environment wisely and predict how it will change.[578]

Earth Observations are intended to support wise action regarding the environment. But as we have explored in this chapter, the instruments used in establishing such data sets need to be calibrated in order to avoid distortions. I have proposed that those calibrations require more than a visit to Greenwich to set one's watch, but rather also entail an appreciation of the inseparability of observer and observed, and a new understanding of scientific observation.

Science's argument for observation in the field cannot be neglected, for example as regards the measuring of sea ice in the Arctic there remains necessary work to be done. But I suggest that we need to combine this with the application of Freudian comprehension of the disavowal of the observed facts, to develop an understanding of the failure to acknowledge observation, and use this in the particular context of a changing climate. That is to say, that charges of omissions in data might be due to our not *wanting* to see, rather than a failure in our instruments, as with our disavowed knowledge of the hole

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575 Williams, *Edward Wilson: Explorer, Naturalist, Artist* (Stroud: The History Press, 2008) p. 272.

576 Cherry-Garrard, *The Worst Journey in the World*, p. 452.

577 National Centre for Earth Observation, 'About NCEO', National Centre for Earth Observation: Natural Environment Research Centre <http://www.nceo.ac.uk/>. [8 May 2014], paras 8.

578 National Centre for Earth Observation, 'About NCEO', para 2/8.

in the ozone, of the disappearing icecaps.[579] Freud might describe this as the repression at play in things that we know but do not want to know. That which is shifted elsewhere, undergoes a distortion, in Freud's terms, it is displaced in exile and covers over the site of a repressed knowledge.[580] These denials can be interpreted through *Entstellung*.

In Weber's deconstructive reading of Freud, he proposes that observation, despite Freud's own protestations, is not at the core of psychoanalysis. At the centre of psychoanalysis, suggests Weber contra Freud, is not observation, but rather a movement towards appearance, something Weber links to *Entstellung*.[581] Hence, for Weber, Freudian psychoanalysis does not find its ground in empirical observation. For Weber, psychoanalysis contains a structural movement of displacement and distortion in common with the ego's defence mechanisms.[582] Psychoanalysis, as a science based upon observation, turns its attention upon itself as an interpretative method, only then through interpretation to generate displacements elsewhere that never lead back to the origin. Thus observation in psychoanalysis turns the attention back upon the observer's role in generating those interpretations. A similar turn can occur in *ekphrasis* in which as writing attempts to describe the absent visual object, we increasingly become aware of the medium and materiality of the rhetoric being used, rather than the ostensible object being described.

The psychoanalytical dream interpretation of *Entstellung* is patterned on the return journey that is different on the way back, or the ring composition in which the chiastic pattern is A-B-C-X-C'-B'-A'. This chiasmus is not a circular one, but the spiral, where 'X' is not the final destination, but the axis of transposition. The chiasmus here is the transposition that occurs in metaphorical language, in figurative descriptions, and in *ekphrasis*.

As in the dream interpretation, the purpose of which is to allow hidden repressed content to emerge, this chiastic *ekphrasis* of Antarctica through

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579 Davis Guggenheim, 'An Inconvenient Truth' (Paramount Classics, 2006), 94 minutes. Starring Al Gore. This film forcefully states its argument that climate change is a fact that vested interests are reluctant to see.

580 Sigmund Freud, *Moses and Monotheism*, p. 165.

581 Weber, *The Legend of Freud*, p. 61.

582 Weber, *The Legend of Freud*, p. 61–62.

the archive will facilitate the appearance of those who are 'other' to the Era of Heroic Antarctic exploration: marginalised ethnographies and eccentric genders. Interrogating the allegory of polar exploration, by applying the interpretative *Entstellung*, can make manifest the repressed ethnographic other and the feminine. Antarctica through the archive is simultaneously landscape as a subject of paintings and art,[583] a source of meteorological data, and an immersive environment in which we are inextricably ecologically implicated. The following two chapters propose refractive readings through the first two chapters. The readings cross over between material-discursive disciplines and practices of anthropology and watercolour, producing refracted interpretations. They explore how an ecological thinking of air, atmospheres and medium can be interpreted through the archive of Wilson's watercolours.

Until recently the iconic Geodesic Dome designed by Buckminster Fuller for the Amundsen-Scott South Pole Station was sited at the South Pole. The Geodesic Dome took its name from geodesy, the measurement and representation of the Earth. The construction, approximating a curved surface, provided a sheltering atmosphere under the facets of glass in a triangulated grid of aluminium mesh. Like the oculus in the painted ceilings of Renaissance domes, this dome had a ventilation hole at its centre: 'Five vent holes were opened in the top of the dome to bleed off warm air'. [584] It was erected in 1971 later to be deconstructed in reverse order to its construction in 2010.

Under another dome in the entrance hall on the way to the Scott Polar Research Institute archive, the blue and white colour palette of the painted ceiling recalls the sky. Painted domes almost always portray some idyllic blue and gently clouded atmosphere. It is as if the changeable and sometimes unsympathetic reality of the external climate has been replaced by the version most habitable and aesthetically appealing to humans. Yet the double domed ceiling of the Scott Polar Research Institute heralds the entry into an archival and bibliographic proximity with some of the most inhospitable and hostile climates on earth.

583 Cosgrove, *Geography and Vision;* Malcolm Andrews, *Landscape and Western Art* (Oxford, New York: Oxford University Press, 1999).

584 Rejcek, Peter, 'Deconstruction of the Dome: Iconic South Pole Building to Come Down During 2009–10 Season', *Aurora Journal*, **29**, 3 (March 2010), pp. 27–29.

Chapter Two Chapter Four
Watercolour The Colour of Water

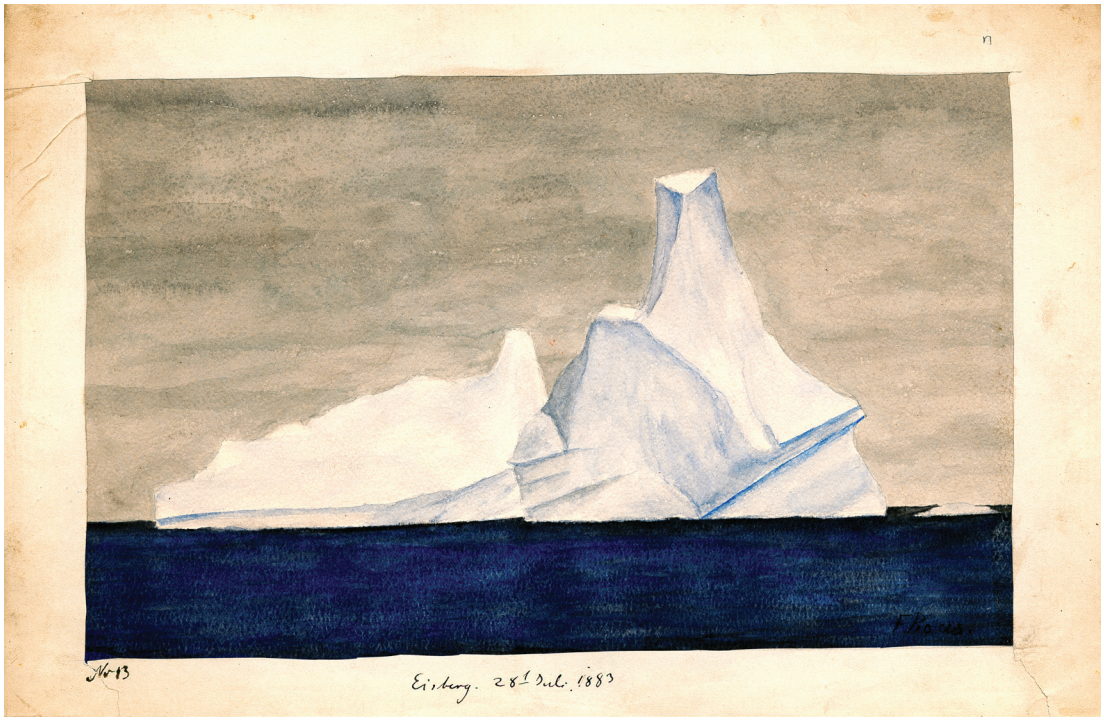

Fig 4.1

Watercolour The Colour of Water

In this chapter, 'The Colour of Water', each section from Chapter Two, 'Watercolour', is refracted, displaced and distorted, that is to say *entstellt* in a chiastic *ekphrasis*. The chiasmus is performed in the crossing-over between the topographical watercolour paintings by the Antarctic explorer Edward Wilson, and the study of the colour of water in the Arctic by the anthropologist Franz Boas (1858–1942). The permanence and fugacity of watercolour is *entstellt*, refracted, displaced and distorted with regard to classificatory systems of race. With the *Entstellung* performed through this chiastic structure, the archive can be interpreted in a manner that allows for the manifestation of its latent subjects. What is enacted here is a chiastic exchange of material between disciplines through the material practices of watercolour, and the colour of water to address the heroic era of Antarctic exploration.

In the Boas archive there is a painting dated during one of his earliest Arctic field trips in 1883. Here Boas used watercolour to make a painting of an iceberg (Fig 4.1). The painting depicts the iceberg in a strikingly deep blue inky sea under a pencil grey sky. Boas's few attempts at watercolour painting produced fair results but not those of an artist.

Boas was a German Jew who first visited America in 1883, and later settled there, to become a major determining force in the development of American anthropology.[585] Yet Boas began his academic career in 1881 publishing his doctorial thesis in physics on the perception and measurement of colour in water: *Contributions to the Understanding of the Colour of Water*.[586] Boas was aware that the results were, at times, dependent on his subjective judgement. After the 1881 publication of his doctorate, Boas wrote a range of further articles to add to his bibliography on the subject of water and ice: 'Ice and

585 Franz Boas, *A Franz Boas Reader: The Shaping of American Anthropology, 1883–1911*, ed. by George W. Stocking (Chicago, London: University of Chicago Press, 1974).

586 Franz Boas, *Beiträge Zur Erkenntnis Der Farbe Des Wassers* (Kiel: Schmidt & Klaunig, 1881). Boas's Phd was later rescinded by the Nazis and his books burnt.

Icebergs', 1887;[587] 'The Formation and Dissipation of Sea-Water Ice', 1887;[588] and a map describing 'The Knowledge of Ice in the south-easterly parts of Baffin Land', 1888.[589]

George W. Stocking (1928–2013), the historian of anthropology, describes Boas's prime as spanning the two decades around the turn of the nineteenth to twentieth centuries. Stocking places Boas, along with Freud, 'squarely in the ranks of those turn-of-the-century thinkers who were creating the modern image of the human animal'.[590] Clifford Geertz describes Stocking's own contribution to the history of anthropology as 'the introduction into anthropology of a genuinely historical eye' and 'the recuperation of Boas from charges of sea-water empiricism'.[591] I draw upon Stocking's historical work for that reason. Stocking notes with regard to *Contributions to the Understanding of the Colour of Water,*[592] that Boas 'complained in the dissertation of the difficulty of judging the relative intensities of two lights that differed slightly in color'.[593] Boas used empirical methodology drawn from the observational practices then current in the natural sciences to question the foundations of those same practices, and out of this developed his theory and practice of anthropology.

Boas made a shift from the physics of the appearance of water to the hermeneutics of the ethnographic encounter: from a scientific empirical methodology to one that takes into consideration the relative and subjective quality of ethnographic knowledge and the necessity of making contextual assessments of value and meaning. Regarding his turn to anthropology, Boas later wrote that the quantitative measuring required for his research into the

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587 Franz Boas, 'Ice and Icebergs', *SCIENCE,* **9,** 217 (1887), pp. 324–25.

588 Franz Boas, 'The Formation and Dissipation of Sea-Water Ice' *SCIENCE*, **10,** 239, (1887), pp. 118–19.

589 Franz Boas, Bruno Hassenstein, and C. Schmidt, 'Die Eisverhältnisse Des Südöstlichen Teiles Von Baffin-Land' (Gotha: Justus Pethes, 1888).

590 George W. Stocking, 'From Physics to Ethnology', in *Race, Culture, and Evolution: Essays in the History of Anthropology* (Chicago and London: The University of Chicago Press, 1968), p. 160.

591 Clifford Geertz, 'Roundtable – George Stocking and Victorian Anthropology', *Journal of Victorian Culture,* **4**, 2 (Autumn 1999), pp. 305–10, p. 308. See also Clifford Geertz, 'Thick Description: Toward an Interpretive Theory of Culture', in *The Interpretation of Cultures* (New York: Basic Books. 1973), pp. 3–30.

592 Boas, *Beiträge Zur Erkenntnis Der Farbe Des Wassers*.

593 Stocking, *Race, Culture, and Evolution: Essays in the History of Anthropology*, p. 142.

colour of water had led him to the understanding that there were 'domains of our experience' that were not amenable to addition and subtraction.[594] Boas also notes the influence of his 'artistically-gifted elder sister to whom [his] materialistic world seemed unendurable'.[595] He decided that his view of the world was not adequate to the task of understanding it and he turned his attentions to what he described as the relation between the organic and inorganic, 'above all between the life of a people and their physical environment'.[596] To this end, Boas travelled to Baffin Land in Northern Canada, inside the Arctic Circle, to live in proximity with the Inuit.[597] Writing on Boas's diary in Baffin Land, Stocking says that it reveals 'a frequent interest in the colour of sea water' and 'problems of perception – for instance, the situational factors affecting the perception of an iceberg, or the relativity of perception of temperature'.[598] Boas's research into the colour of water opened up his questioning of quantitative measuring. Colour is not easily located as a property of an object (as mass might be) but is rather a product of the conditions of perception and environment. It was the choice of colour as an object of study that was the very thing that led Boas to this interest in the inextricable mutuality of people and environment. Boas's observations of Arctic seawater led him to the territory that would become his ethnographic field, and to the encounters with the people that would become his ethnographic informants.

In 1906, on the occasion of the twenty-fifth anniversary of the publication of his doctorate on the colour of water, Boas was presented with the *Boas Anniversary Volume, Anthropological Papers*.[599] In this publication a photo taken by Boas during the very fieldtrip that produced the iceberg watercolour of

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594 Boas, *A Franz Boas Reader: The Shaping of American Anthropology, 1883–1911,* p. 42.

595 Boas, *A Franz Boas Reader: The Shaping of American Anthropology, 1883–1911*, p. 42.

596 Boas, *A Franz Boas Reader: The Shaping of American Anthropology, 1883–1911*, p. 44.

597 Müller-Wille, Ludger, (ed.), *Franz Boas among the Inuit of Baffin Island, 1883–1884: Journals and Letters*, trans. by William Barr (Toronto: University of Toronto Press, 1998).

598 George W. Stocking, *Glimpses into My Own Black Box: An Exercise in Self-Deconstruction* (London, Wisconsin: The University of Wisconsin Press, 2010), p. 145.

599 Laufer, B., (ed.), *Boas Anniversary Volume, Anthropological Papers, written in honour of Franz Boas, Professor of Anthropology, presented to him on the twenty-fifth anniversary of his doctorate,* (Columbia University, New York: 1906).

Baffin Land in the Arctic Region of Nunavat, Northern Canada supplies the end-paper motif. It shows the Boas Glacier in the background and in the foreground is the anthropologist's tent, located amongst his informants (Fig 4.2). Under Boas's scientifically trained mind, the perception and interpretation of the colour of water had turned into a broader inquiry that explored the relation between people and their environment, and questioned colour as racial type.

Fig 4.2

It was crossing the ocean on his first expedition that prompted Wilson's complaint about his ship-tossed palette of watercolours: 'everything wanders if it isn't chained up'[600] (see Chapter 2: Everything Wanders), but I would like to offer Wilson's comment here as a critique of typological formalism that provides categorisation in advance in order to establish boundaries between fugitive material realities.

The archaeological and ethnographic collector Pitt-Rivers, who claimed to have coined the term 'typology', noted with admiration that 'the only instance of scientific arrangement that has been seen within the walls of a Government Building in England' was in an example of typological display hosted by an American museum. He wrote:

> The Americans are in advance of us in many things and in this amongst others. They have the advantage of a tabula rasa to begin upon, and are not fettered by the habits and traditions of Institutions that have grown into maturity in a pre-scientific age.[601]

Although Pitt-Rivers praised American moves towards a typological formalism in museum display, reckoning that the relative youthfulness of their civilisation offered, like Antarctica, a clear slate, American curators were arguing among themselves over museum display: Boas took part publicly in a dispute by staging a critique of evolutionism via an exchange with Otis Mason who was his interlocutor in American museum practice.[602]

Boas was against the idea of the absolute stability of types.[603] He was resolutely particular. For Boas, cultural artefacts had to be understood in the cultural context to which they belonged:

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600 George Seaver, *Edward Wilson of the Antarctic,* p. 80.

601 Salisbury and South Wiltshire Museum (S&SWM), Pitt-Rivers Papers, P142d, Pitt-Rivers, 'On the Uses and Arrangement of Arts Museums 1889-1890', Lecture given at Blackmore Museum, Salisbury. Available at 'Rethinking Pitt Rivers' <http://web.prm.ox.ac.uk/rpr/index.php/article-index/12-articles/682-uses-and-arrangements-of-museums/index.html> [accessed 30 July 2014], para 38. Here after 'On the Uses and Arrangement of Arts Museums 1889–1890'.

602 John Buettner-Janusch, 'Boas and Mason: Particularism Versus Generalization', *American Anthropologist,* **59**, 2, (1957), pp. 318-24.

603 See Stocking, *Race, Culture, and Evolution: Essays in the History of Anthropology*

> the object of our study is the individual, not abstractions from the individual under observation.[604]

Boas's critique of racial formalism was concerned with, as Stocking puts it, 'the problem of the historical continuity of physical type' as well as 'the meaning and significance of the idea of "type" itself'.[605] 'The Measurement of Variable Quantities' in the 1906 *Archives of Philosophy, Psychology and Scientific Methods* has a bearing upon Boas's critique of the classification of types.[606] Boas wrote, 'Strictly speaking, no two measurements are absolutely the same'.[607] Here Boas explains the philosophical and statistical theory behind identity, sameness and difference.[608] In this essay, using the term 'phenomenon', Boas defines what constitutes the constants or variables in processes of measurement and observation.

> While in some groups of phenomena a complete definition can be given which compels us to consider a repetition of a phenomena as identical with the original one, in others such definitions are not possible, and the individual repetitions always possess independent elements which are not contained in their common definition.[609]

Boas concludes that phenomena will be taken to be the same on the basis of the same measurements being produced, yet he notes that this definition of sameness will be open to refutation on the basis of new empirical evidence. He makes his point by saying that:

> with increasing knowledge objects or phenomena which once appeared as constants may come to be considered as variables, because what seemed at one time as quantitatively the same is proved to be different elements.[610]

Boas continues with the examples to illustrate his point of 'The discovery in variations in latitude and of new elements which are found in very small

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604 Franz Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart', *SCIENCE,* **9,** 224 (1887) <https://archive.org/stream/jstor-1764017/1764017#page/n1/mode/2up> [12 December 2014]. pp. 485–86, p. 485.

605 Stocking, *Race, Culture, and Evolution: Essays in the History of Anthropology,* p. 181.

606 Franz Boas, 'The Measurement of Variable Quantities', *Archives of Philosophy, Psychology and Scientific Methods,* Ed. by Y J. McKeen Cattell and Frederick J.E. Woodbridge, **5** (June 1906).

607 Boas, 'The Measurement of Variable Quantities', p. 2.

608 Boas, 'The Measurement of Variable Quantities', pp. 2–3.

609 Boas, 'The Measurement of Variable Quantities', p. 2.

610 Boas, 'The Measurement of Variable Quantities', p. 2.

quantities mixed with other elements'.[611] This phrase recalls the ship-tossed palette of Wilson's watercolours.

In 'The Principles of Ethnological Classification', Boas writes:

> …it is my opinion that the main aim of ethnological collections should be the dissemination of the fact that civilization is not something absolute, but that it is relative, and that our ideas of and conceptions are true only so far as our civilization goes.[612]

In wanting artefacts of ethnology to be understood in the social and geographical context of their surroundings, Boas makes anthropology historical.[613] Stoking writes that 'it is this sense of the historicity of ethnic phenomena…that is the most noteworthy aspect of Boas' early ethnological theorizing'.[614] That is, he attends to the historical specificity of individual artefacts in the context of their cultures, and allows for the comprehension of their change over time. Stocking makes a comparison between the contrasting 'ideological messages' made on the one hand by Pitt-Rivers when 'arranging objects linearly, in terms of externally defined formal or functional qualities, to convey an ethnocentric message of conservative evolutionary gradualism' and on the other by Boas, 'arranging them contextually, seeking to preserve the multiple functions and inner meanings of a given form, to convey a message of liberal relativism'.[615]

Writing in 1905 in 'The Educational Function of Anthropological Museums', Boas makes a distinction between the scope of a small collection and that of a large.[616] The former, he argues, can make instructive use for the

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611 Boas, 'The Measurement of Variable Quantities', p .2.

612 Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart' and 'Museums of Ethnology and Their Classification', *SCIENCE,* **9** (1887), pp. 485–86, 587–89. Reprinted as 'The Principles of Ethnological Classification', in *A Franz Boas Reader: The Shaping of American Anthropology, 1883-1911*, pp. 61–66, p.66.

613 Franz Boas, 'The History of Anthropology', in *A Franz Boas Reader: The Shaping of American Anthropology, 1883-1911,* pp.23–36. See Franz Boas, *The History of Anthropology* in Address to the International Congress of Arts and Sciences, St Louis, September 1904, as published in Congress of Arts and Science, ed. H.J. Rogers, 8 vols (Boston: Houghton Mifflin, 1906), Vol. 2, pp. 468–82. Also published in *SCIENCE,* **20** (1904), pp. 513–24.

614 Stocking, 'From Physics to Ethnology', in *Race, Culture, and Evolution: Essays in the History of Anthropology,* p. 152.

615 Stocking, 'Museums and Material Culture', in *Objects and Others: Essays on Museums and Material Culture*, p. 8.

616 Franz Boas, 'The Educational Functions of Anthropological Museums', in *A Franz Boas Reader: The Shaping of American Anthropology, 1883–1911*, pp. 297–300.

general public of a few artefacts in explicating the most generalised questions while details are ignored, but 'to adhere to a systematic plan' in order to address 'the general question of the evolution of culture' was not feasible for a large museum.[617] On the same page he continues to argue that the complexity of the wider ambition of understanding culture demands multiple viewpoints and cannot be reduced to a schema. 'Special questions' of cultural practices, and the points of view from which they must be seen and studied 'vary from case to case'.[618] He writes: 'If we try to devise a general scheme for their exhibition, we frustrate our own end'.[619] Boas is concerned here with the reduction of specificity that generalisation and categorisation inflict upon phenomena.

617 Boas, 'The Educational Functions of Anthropological Museums', p. 298.

618 Boas, 'The Educational Functions of Anthropological Museums', p. 298.

619 Boas, 'The Educational Functions of Anthropological Museums', p. 298.

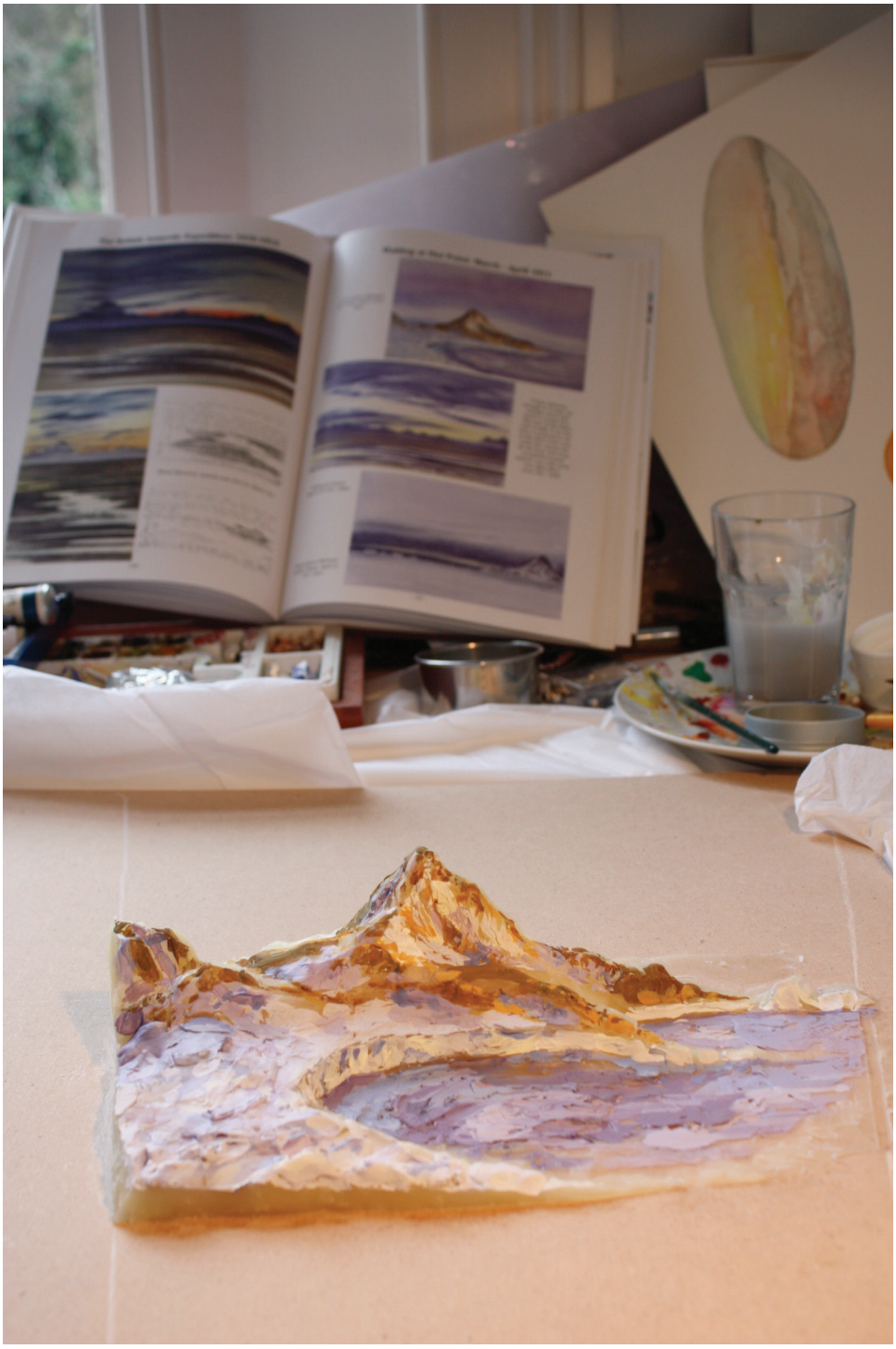

Fig 4.3

On Turnerian Topography The Study of Geography

While Boas was making his own disciplinary transition from physics to anthropology he wrote 'The Study of Geography',[620] a short essay exploring the disciplinary defensiveness of geography as a new science amongst other sciences. Studying geography he understood to be motivated by 'the love for the country we inhabit, and the nature that surrounds us'.[621] For Boas the motivating force in geography had shifted its emphasis from being that of the explorer's thrill at discovering new and unknown territories, to the 'desire to *understand* the phenomena of newly discovered regions by comparing them with those of one's own country' (Fig 4.3).[622]

Contrary to the then current orthodoxy, Boas did not grant geology a dominant status, saying rather that, given that geography's aim was 'to delineate the picture of the earth's surface', it needed therefore to be what we would now call a multi-disciplinary subject, calling upon the knowledge and methods of a broad range of subjects: ' the subject of geography is distributed among a great number of sciences'.[623] Boas noted that, in his notion of geography, geology did not reign over the other disciplines, and that the study of human culture was of equal import, 'We give geology no preference'.[624] Boas describes geography as the study of phenomena, but not for the sake of identifying the general law, as in science.[625] The connection, Boas writes, between scientific phenomena, is objective, whereas for geographical phenomena, 'the connection seems subjective, originating in the mind of the observer'.[626] Boas sets up a contrast between scientific thinking that pursues general laws observable in a set of phenomena and the form of thinking that is subjective and simultaneously particular and holistic. Ultimately, Boas situates geography on the side of this second form of thought:

620 Franz Boas, 'The Study of Geography' in *SCIENCE*, **9**, 210 (1887), pp. 137–41.
621 Boas, 'The Study of Geography', p. 141.
622 Boas, 'The Study of Geography', p. 141.
623 Boas, 'The Study of Geography', p. 138.
624 Boas, 'The Study of Geography', p. 141.
625 Boas, 'The Study of Geography', p. 138.
626 Boas, 'The Study of Geography', p. 138.

> Our consideration leads us to the conclusion that geography is part of cosmography, and has its source in the affective impulse, in the desire to understand the phenomena and history of a country or of the whole earth, the home of mankind.[627]

I propose that we can understand the shift in Boas's thinking as it moved from studies in empirical physics via this formulation of geography as the study of 'the home of mankind' to anthropology (Fig 4.4).[628]

627 Boas, 'The Study of Geography', p. 141.

628 Boas, 'The Study of Geography', p. 141.

Fig 4.4

I interpret Pitt-Rivers's typological vision for anthropological artefacts as a wish to reduce history to the restricted late-nineteenth-century notion of evolution as progress. In 'The Evolution of Culture', derived from a lecture he gave in 1875, Pitt-Rivers wrote: 'History is but another term for evolution'.[629] Here Pitt-Rivers subsumes history within nature as evolution in a predestined telos. What Boas and Pitt-Rivers are contesting here are the terms 'nature' and 'history'. With Boas it might be a question of direction: do not begin with classes then work outwards he suggests, but rather let historical processes elucidate the goal of identifying the classes. Stocking puts Boas's ideas on this as follows:

> Furthermore, in each area classification was a goal to be achieved, rather than the starting point of investigation. In each area it depended on the prior study of the historical processes that conditioned the apparent likeness of effects in the present. And since these interacting processes had operated in the past as well as the present, one could never assume that the earlier stages of any phenomenon were necessarily simpler ones.[630]

Stocking says that Boas abandoned formal comparison in ethnographic display, and turned towards a preference for focusing on 'process in the present'.[631] Boasian thinking on ethnographic display and the meaning of culture emerged in reaction to evolutionary anthropology: Boas's thinking introduced an understanding that artefacts were relative to their cultural context.

Boas turned his attention to art as a particular case of ethnographic object, and refuted the idea that art was evolutionary, to be located on a trajectory from realism to abstraction. Rather he held that art had to be seen within the traditions and histories of a culture: theories of orthogenetic linear progress were untenable, he argued, as cultures were too complex, and the products of past diffusion and borrowing made any simple line of descent inadequate to

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629 Lecture given at the Royal Institution of Great Britain, Friday, 28 May 1875, published in the Proceeding of the Royal Society, Vol. 7. pp. 496–520. Reprinted in Lane Fox Pitt-Rivers, *The Evolution of Culture and Other Essays,* p. 24.

630 George W. Stocking, 'The Basic Assumptions of Boasian Anthropology', in *A Franz Boas Reader: The Shaping of American Anthropology, 1883–1911*, p. 15.

631 Stocking, '*The Basic Assumptions of Boasian Anthropology*', *A Franz Boas Reader: The Shaping of American Anthropology,* p. 15.

the task of description. Boas also wanted to bring history back into the frame when considering race and human types, so that the evolutionary principle did not overrule any other interpretation.

Whereas race, language and culture had been understood by Pitt-Rivers as stable and interchangeable classifications of type, Boas showed that they each had their own specific and local histories and they could not be interchanged.

> In short, historical events appear to have been much more potent in leading races to civilization than their faculty, and it follows that achievements of races do not warrant us in assuming that one race is more highly gifted than the other.[632]

Boas's 1916 essay on 'Representative Art of Primitive People'[633] makes a comparison between the art of primitive people and that of modernist artists of his time. The argument he makes here is that skill is not the issue, but rather it is the different values and intentions that lie behind the endeavour that are important. The art of primitive people and the examples he points to within the history of European painting can be seen to share the same aim: that is to show what is important to a scene, whether or not it is visible from one point of view. In his discussion of western art Boas points out the manner in which paintings, thought of as observational, actually propose an unrealistic representation of the experience of vision, by presenting an array of visual clarity across an entire scene that in real experience would appear fleeting.[634] In addition, contemporary art, he says, had only recently taken on the idea of using this focus in order to draw the eye to the important point. Boas's view reflects, in the history of western art and in examples of primitive art, the inclination to represent what appears permanent rather than mutable. Convention and feeling for the need to describe the permanent features in a work of art override the ambition of making a figuratively and observationally accurate representation that might include the fugitive.

> Similar observation may be made in regard to color. We find that almost throughout, the colors which are utilized are those in which an object appears

632 Franz Boas, *The Mind of Primitive Man* (New York: The Macmillan Company, 1911), p. 17.

633 Franz Boas, 'Representative Art of Primitive People', in *Race, Language,* and *Culture,* pp. 535–40. First published in *Holmes Anniversary Volume* (Washington, 1916), pp. 18–23.

634 Boas, 'Representative Art of Primitive People', p. 539.

to us permanently.[635]

Elizabeth Williams writes that in the late nineteenth century primitive art offered an opportunity to turn away from the naturalist aesthetic.[636] She describes how the argument arose in art that other cultures be considered as providing avenues away from the classical.[637] What's more, she adds, the efforts to categorise the primitive arts were at that time of little concern for the artist-proponents of modernism.[638] As Williams writes, the 'appropriation of "primitive" aesthetic values by modernist aesthetes'[639] was not problematised by the question of whether that item was deemed more suitable for a museum of natural history or art history: the 'primitivist revolution' that was re-evaluating the meaning and value of primitive art proceeded regardless.[640] The debate over the primitivist art object's proper place in either the museum of art or the museum of natural history was a question of what I would call 'museological genres'.

Teleological evolution supposes some preordained end point in the future that pulls the past forward, rather than a retrospective interpretation of consequences. Teleology in evolution sees some goal, rather than the retrospective understanding of the advantages that some mutation bestowed instead of another. Darwin agued, for example, that evolution was non-teleological, that telos could not be inferred,[641] in contrast to the teleological ideologies of progression in social evolutionism that his ideas were taken to support. But here, it is not a question of the distinction between Natural History or Art History: the natural change in evolution or the progression of change in history; neither is it a question of evolution on the one hand and history on the other, but rather of teleological or non-teleological

635 Boas, 'Representative Art of Primitive People', p. 540.

636 Elizabeth Williams, A., 'Art and Artifact at The Trocadero', in *Objects and Others: Essays on Museums and Material Culture,* pp. 146–66. Williams refers to Soldi's *Les Art Méconnus* (1881).

637 Williams, 'Art and Artifact at The Trocadero', p. 154.

638 Williams, 'Art and Artifact at The Trocadero', p. 147.

639 Williams, 'Art and Artifact at The Trocadero', p. 164.

640 Williams, 'Art and Artifact at The Trocadero', p. 148.

641 See Darwin's response to Asa Gray, 1860, 'Review of *On Origin of Species'* in the *Atlantic Monthly,* in Charles Darwin, *The Correspondence of Charles Darwin*: Vol. 8, ed. by Frederick Burkhardt (Cambridge, Harvard: Cambridge University Press, 1993).

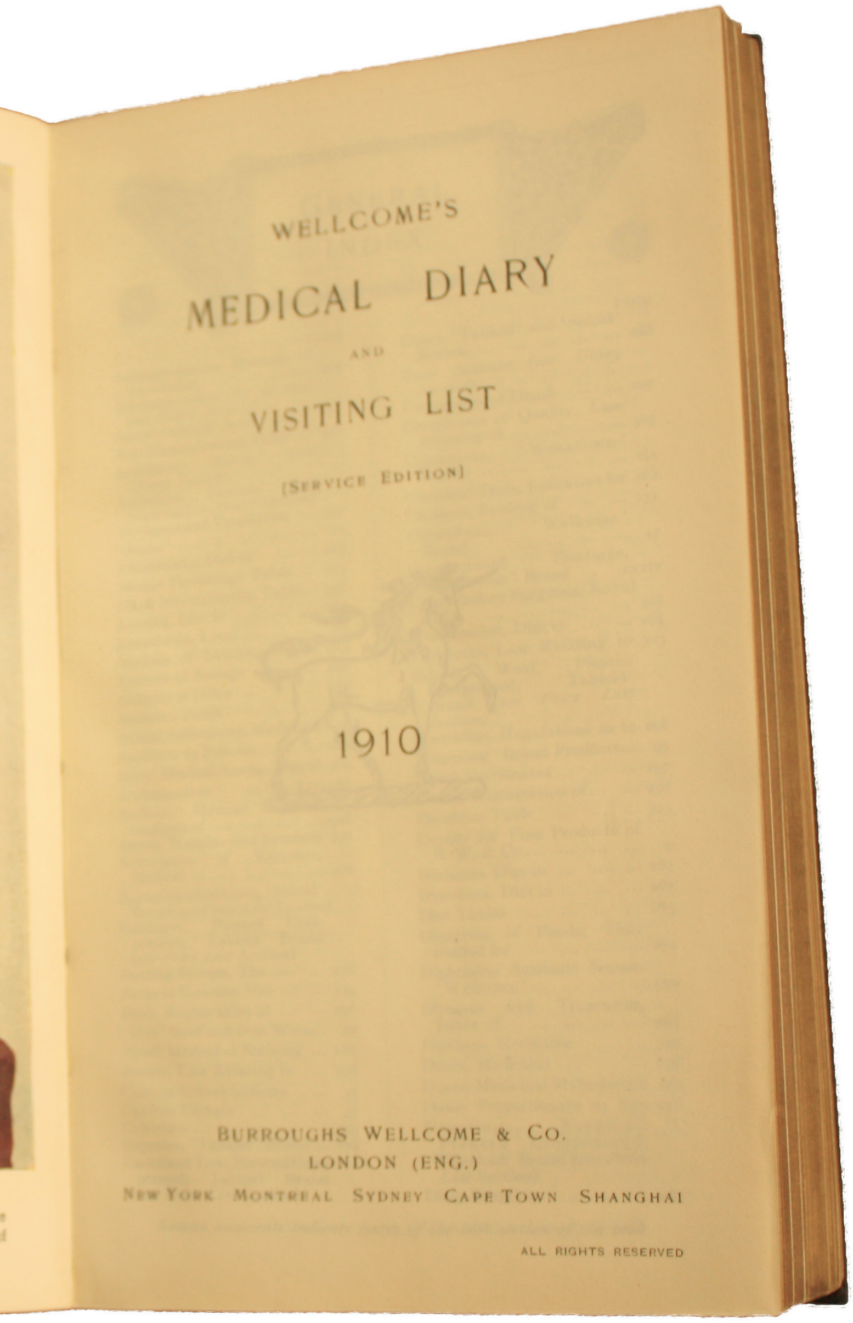
interpretations, that is, interpretations that read final causes into the sequence of occurrence. With that in mind, we can return to the affirmation that Pitt-Rivers made that, 'History is but another term for evolution',[642] but to read this quote in the light of a non-teleological interpretation of both history and evolution. History and evolution *are* the same kind of thing, but not in the manner Pitt-Rivers identified them to be. It is not as if they are or are not alike, but rather a question of *how* they are like each other. It is a question of the terms of the analogy. In other words, it depends upon the axis along which the analogy is transposed, or what I would term as the refractive index of their comparison.

642 Lane Fox Pitt-Rivers, *The Evolution of Culture,* p. 24.

THE MANUKA OF WHAKATANE

A Maori Talisman of Life and Health. It was regarded as the essence and semblance or personality of health, of life and of spiritual prestige

Fig 4.5


WELLCOME'S
MEDICAL DIARY
AND
VISITING LIST
[SERVICE EDITION]
1910
BURROUGHS WELLCOME & CO.
LONDON (ENG.)
NEW YORK MONTREAL SYDNEY CAPE TOWN SHANGHAI
ALL RIGHTS RESERVED

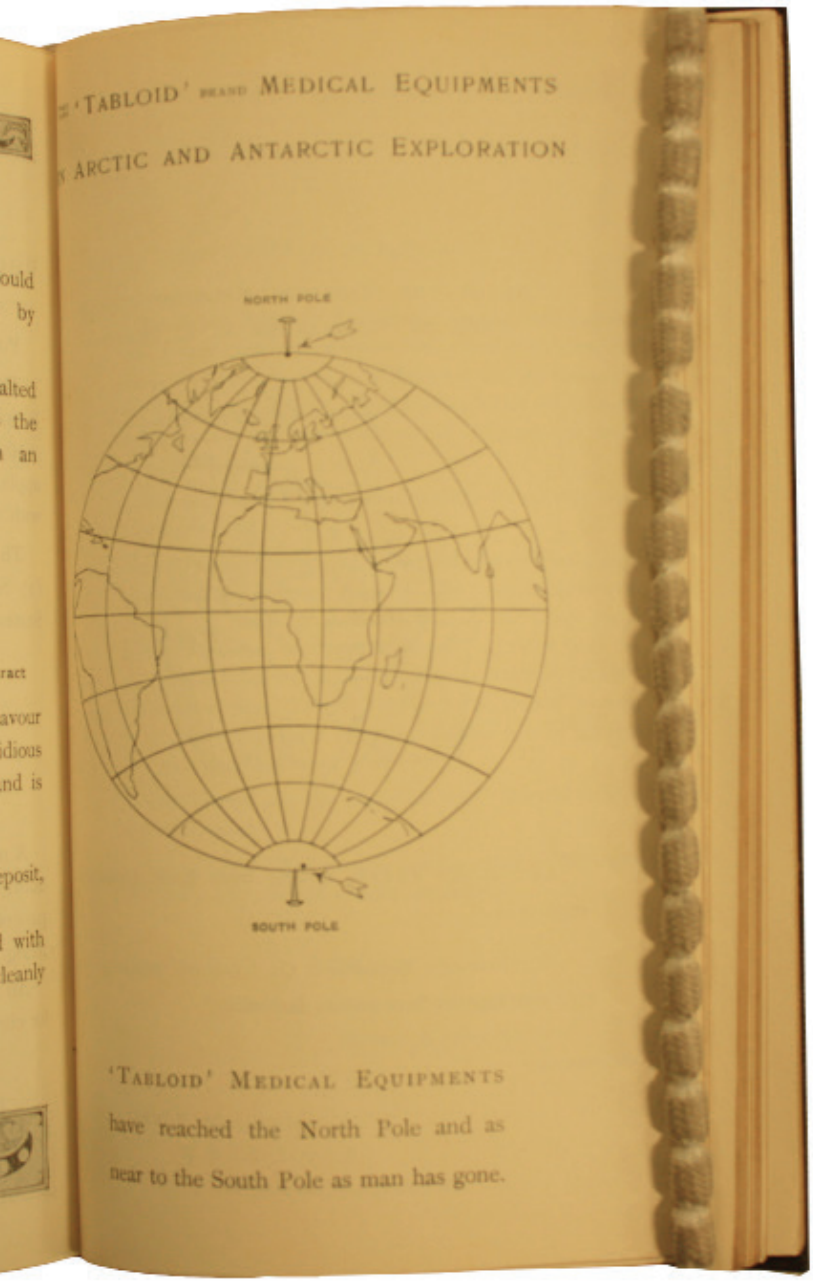

'TABLOID' BRAND MEDICAL EQUIPMENTS
ARCTIC AND ANTARCTIC EXPLORATION
NORTH POLE
SOUTH POLE
'TABLOID' MEDICAL EQUIPMENTS
have reached the North Pole and as
near to the South Pole as man has gone.

Fig 4.6

Wilson's *Wellcome's Medical Diary and Visiting List* (1910)[643] functioned both as a reference source and as Wilson's sledge journal on his fateful trip to the South Pole 1911–1912.[644] What you do not experience in published transcriptions of Wilson's sledging diary is the way that he writes over this pre-printed manual of medicine and promotions for Wellcome products. The effect is to create a kind of palimpsest through which cross readings occur.

Sir Henry Wellcome (1853–1936) was a collector, philanthropist, and pharmaceutical businessman. He was an innovator in 'modern advertising techniques such as promotion, image and branding' who used his wealth in part for 'amassing an astonishing collection of historical objects, which at the time of his death was larger than that of many of Europe's most famous museums'.[645] The *Wellcome Diary* of 1910 is full of motifs from Maori culture in figures and carvings pictured at the beginnings to chapters (Fig 4.5). Wilson's pencil writing and sketches are then interspersed with these ethnographic figurines -totem poles, patterns, and wooden artefacts, which intercede in the text as decorative breaks. The introductory pages introduce the Manuka of Whakatane as a Maori medicine man and poet. A carved Maori figure holding a small baby-like figure in its belly can be seen above the index. And the diary begins with a description written by Henry S. Wellcome on the 'Antient (sic) Maori Medicine' 'Manuka of Whakatane'.

> The Tohunga, or medicine-man, belonged to a sacred hereditary class and guarded his knowledge with extreme care. He was generally a man of high birth, noble mien and exceptional physique, and was not only the physician, but also the priest, the seer, and the poet of his tribe.[646]

643 London, Wellcome Library (WL), Wellcome and Borroughs. 1910, *Wellcome's Medical Diary and Visiting List*, (1910). Accession: WF/M/PB/003/23. Here after *Wellcome's Medical Diary and Visiting List,* (1910).

644 London, British Library (BL), 'The Sledging Diary and Memoranda of Edward Adrian Wilson' (1911–1912), Accession: 47459. Edward Wilson, 1 November 1911 to 27th February 1912 [The sledge Journey to the South Pole]; Seen as microfilm copy. This copy hereafter referred to as 'The Sledging Diary and Memoranda' [on microfilm].

645 The Wellcome Trust, 'History of Henry Wellcome' <http://www.wellcome.ac.uk/about-us/history/index.htm> [19 July 2014].

646 'The Sledging Diary and Memoranda' [on microfilm] (Frame 3)

With a slight distortion this could describe Wilson's role in the polar party. The doctor and the artist, he was deeply religious, trusted by all for his wisdom, acknowledged for his skills as a mediator, someone to turn to for advice and medical care.[647]

Sir Henry Wellcome used the pages of the medical diary to promote his ethnographic activities.[648] Burroughs Wellcome & Co exported standardised brands to all corners of the globe and Wellcome simultaneously gathered back to the centre items suitable for display in his ethnographic collection. He used the salesmen of his pharmaceutical empire as his in-the-field buyers of ethnographic curiosities, and used the pages of the *Wellcome's Medical Diary and Visiting List* to promote his collecting activities and request further items and information:

> The Historical and Medical, Chemical and Pharmaceutical Objects with I projected some time ago, is still in process of organization. Owing to the magnitude of the work involved in arranging, classifying, and obtaining loans of interest from all quarters of the globe, I regret I am still unable to announce a definite date for the opening of the Exhibition. It is my desire to make it as complete and comprehensive as possible, and to do this a considerable period of time is necessary. Meanwhile, I should greatly appreciate any information which may be forwarded to me in regard to medical traditions, references and illustrations of antient medical or surgical treatment, and also the offer of loans of any suitable objects. A syllabus of the Exhibition will be forwarded on request.[649]

Wellcome demonstrated the double movement in the function of Empire of the need for the outward commercial distribution of goods to global markets and the gathering back to the centre in the form of profits, and the plunder of cultural artefacts.

Boas's writing of the same period challenged theories about white European supremacy, arguing that the Europeans had conquered colonial primitive people by virtue of a two-pronged influx of disease and goods:

> The problem presents itself of discovering the reason why the tribes of ancient

---

647 'Dr. Wilson, the chief of our scientific staff, helped us all. He was our Solomon. To "Uncle Bill" we all went for sound practical advice.' E.R.G.R. Evans, 'The British Antarctic Expedition, 1910–13', *The Geographical Journal,* **42** (July) (1913), pp. 11–28, p. 15.

648 *Medicine Man: The Forgotten Museum of Henry Wellcome*, ed. by Ken Arnold and Danielle Olsen (London, British Museum Press, 2003).

649 'The Sledging Diary and Memoranda' [on microfilm] (Frame 3)

> Europe readily assimilated the civilization that was offered to them, while at present we see primitive people dwindle away and become degraded before the approach of civilization, instead of being elevated.[650]

His answer to the rhetorical question of whether this assimilation was proof of 'higher organization of the inhabitants of Europe'[651] was a 'no'. Rather, he put it down to two factors that ancient Europeans did not have to contend with; the devastating consequences of disease in the reduction of populations, and the methods of manufacture that the incoming colonisers brought with them with which labour-intensive hand-made artefacts could not compete.[652] To give examples of this, Boas compared histories of White colonisation of Africa with what he terms Mohammedan colonisers, Mohammedan being the then current term for the follower of the Islamic prophet Mohammed, the preferred term now would be Muslim or Islamic. Boas attributes the difference between White and Mohammedan colonisation to a talent for assimilation between the Mohammedans and their colonised peoples. In contrast 'the whites send only products of their manufacture'[653] to the colonies, avoiding any significant cultural mixing. The arrival of the Wellcome salesman came in the wake of this colonial import of disease and cheap goods. His Wellcome medicine chest metaphorically represented both the disease and the cure. As in the pharmakon, it carried the poison and remedy in one.

The term 'pharmakon' can mean medicine, drug or artificial colour and paint, amongst other things. Historically, the chemical pigments used by artists and chemicals supplied for medical purposes had been sold side by side by apothecaries and grocers; their separation between these sales outlets only occurred during the nineteenth century.[654] In fact many pigments also had uses as medicines. Both Winsor & Newton, manufacturers of art materials, and Wellcome were sponsors of the expedition. What is more, they can be found sharing the advertising space in the catalogue produced for the *Discovery*

650 Boas, *The Mind of Primitive Man*, pp. 10–11.

651 Boas, *The Mind of Primitive Man*, p. 11.

652 Boas, *The Mind of Primitive Man*, pp. 12–13.

653 Boas, *The Mind of Primitive Man*, p.15.

654 Kirby, Jo, Susie Nash and , Joanna Cannon, (eds.), *Trade in Artists' Materials: Markets and Commerce in Europe to 1700* (London: Archetype Publications, 2010).

Antarctic Exhibition held at Bruton Galleries in 1904.[655] The Borroughs, Wellcome and Co. advert reads:

> The entire medical equipment of the British National Antarctic Expedition was supplied by Burroughs Wellcome & Co. […]Tabloid' Equipments are compact; 'Tabloid' Medicaments are of proved permanence and reliability in all climates.[656]

The Winsor & Newton Limited advert reads as follows:

> Manufacturers of Finest Artists' Oil & Water Colours & Materials. These colours were supplied to the "Discovery" Expedition also to the " Morning" relief Expedition.[657]

The companies had in common a concern with the chemical consistency and standardisation, and the global reach of their products.

Wellcome's own extraordinary success as a salesman of medical products had grown out of an innovation made for the purposes of art. The tablet form that Burroughs Wellcome & Co marketed as TABLOID was developed from an invention by British explorer and artist William Brockendon, who in 1843 had patented a mechanism for crushing and pressing graphite to produce better-quality pencils. Brockendon was hired by the American drug firm John Wyeth and Brother 'to make compressed medicines with the same technique'.[658] Borroughs, as the sole importer of Wyeth tablets in England, saw the opportunity to expand the market and asked Wellcome to join him.[659] They went on to become manufacturers and established the TABLOID as a brand name in 1884.[660] They fought hard to defend it from use by others, and used the pressed pill to provide a standardised dosage, and to help make their products known for purity and accuracy.[661] In the edition of Wellcome's Medical Diary that Wilson had a copy of, under the heading 'Wellcome Brand products' the following is written:

---

655 Paul G. Konody, *'Discovery' Antarctic Exhibition,* p. 82.

656 'Tabloid Medical Equipments', advert in Konody, *'Discovery' Antarctic Exhibition*, p. 31.

657 'Winsor & Newton' advert in Konody, *'Discovery' Antarctic Exhibition*, p. 55.

658 Penny Bailey, 'The Birth and Growth of Burroughs Wellcome & Co.' (November 2008) The Wellcome Trust < http://www.wellcome.ac.uk/About-us/History/WTX051562.htm.> [19 July 2014], para. 22.

659 Bailey, 'The Birth and Growth of Burroughs Wellcome & Co.', paras 2/22.

660 Bailey, 'The Birth and Growth of Burroughs Wellcome & Co.', paras 14/22.

661 Bailey, 'The Birth and Growth of Burroughs Wellcome & Co.', paras 15/22.

> While the attainment of the 'Wellcome' Standards has necessitated extensive scientific research and much technical experiment, the maintenance of their stringency and the perfecting of the methods of standardisation still form the subjects of continuous research. The standards and processes will be revised, perfected and extended in accordance with results obtained in these investigations.[662]

The ambition was to spread and embody a global standard in the product. Wellcome's Medical Diaries, featuring his own drug adverts, functioned as a prescription manual, measurement tables, as a manual of medicine *and* a promotion of Wellcome products, as well as a place to scribble down appointments and note information about one's patients. In its pages there are concerns for maintaining the standards of the brand, and advice to medical practitioners as to how to support this through their prescribing habits. For example, it is noted that the words 'Tabloid' and 'Soloid' should always be written in full to ensure the supply of genuine B.W. & Co. products:

> … When 'Tabloid'_____ _____ or 'Soloid'_____ _____ is written, in whatever part of the world the prescription is dispensed, the patient will receive the same genuine products of uniform strength and unvarying activity compounded with exceptional accuracy from ingredients of the highest standards of purity.[663]

Wilson's pencil-written entries include some underlining emphasising part of the printed text, notes that log his position, along with his diary entries, and some sketches. In the section titled 'Memoranda', Wilson has jotted down two little sketches along with the following 'to do' note:

> Paint 2 pole pictures 'The Queen's flag at the British Pole' and 'And the south Pole for King George'.[664]

And further, towards the end of the book, there is a quickly jotted tally as Wilson calculates how many days' worth of food remain. This bald calculation comes after his final diary entry and is followed by empty pages filled only with Wellcome's brand advertisements. There is a further poignant advert titled: 'Trade Mark "Tabloid" Brand Medical Equipments in Arctic and Antarctic Exploration'. It is illustrated with an image of the globe with a pin at either pole, and an arrow labelled North Pole and South Pole (Fig 4.6) and

662 *Wellcome's Medical Diary and Visiting List*, (1910), p. 262.

663 'The Sledging Diary and Memoranda' [on microfilm], frame 8.

664 'The Sledging Diary and Memoranda' [on microfilm], frame 148/p.251)

is captioned.

> TABLOID' Medical Equipments have reached the North Pole and as near to the South Pole as man has gone.[665]

This sledging journal was found with Wilson's frozen body in the tent in which they perished. The covering of the same tent was also put on display with a caption reading 'The actual Tent in which the Bodies of Captain Scott and his Companions were found by the Search Party' as part of an exhibit at Earls Court in 1913, on a patch of fake snow, amongst glass display cases. In the same spirit of collection as Wellcome pursued in accumulating his ethnographic collection of medical and pharmaceutical history, Wilson's medicine case was returned and put on display in a glass case (Fig 4.7).

665 'The Sledging Diary and Memoranda' [on microfilm] (frame 257/facing p. viiii after 'Memoranda').

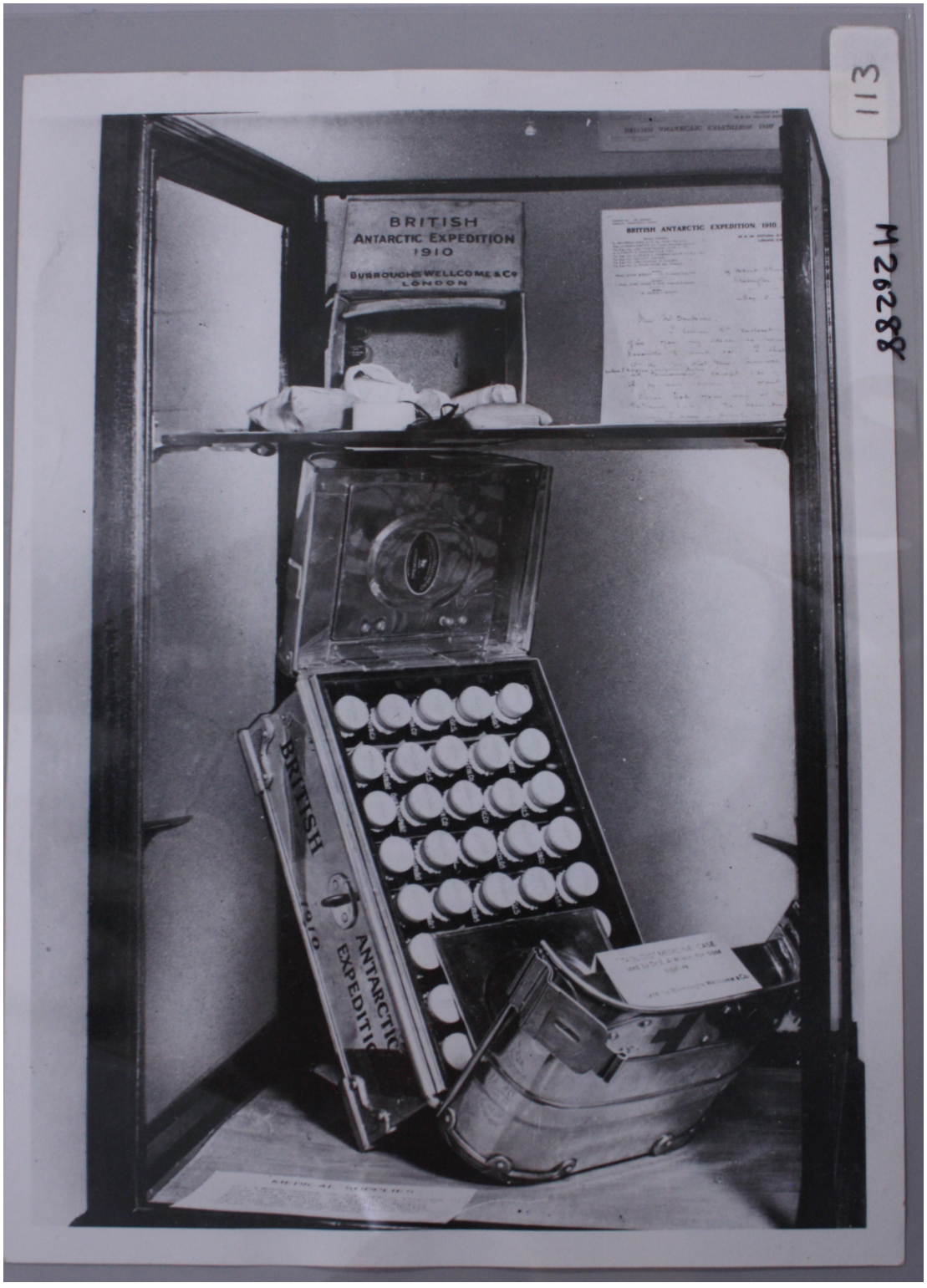

BRITISH
ANTARCTIC EXPEDITION
1910
BURROUGHS WELLCOME & Co
LONDON
BRITISH ANTARCTIC EXPEDITION 1910
BRITISH
ANTARCTIC
EXPEDITION
113
M26288

Fig 4.7

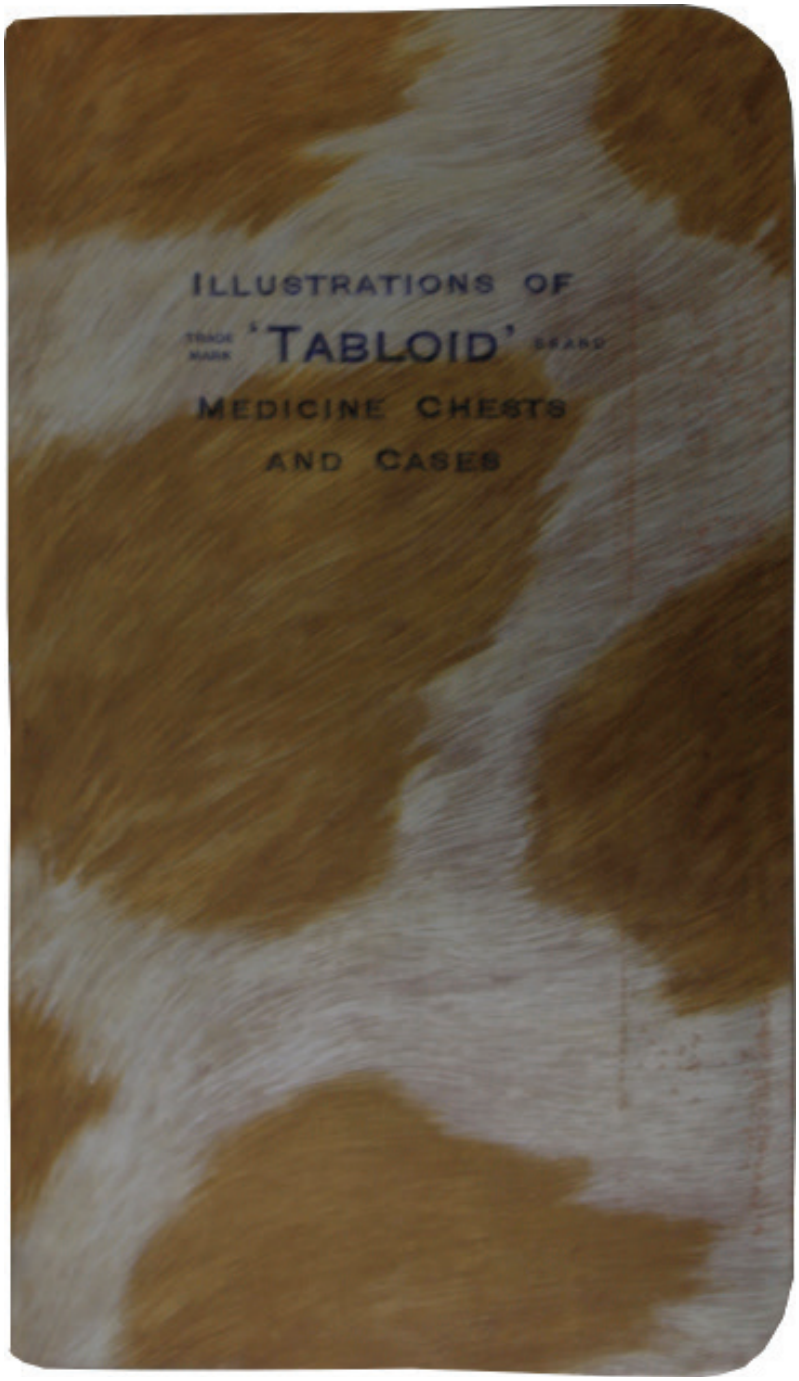

ILLUSTRATIONS OF
TRADE MARK 'TABLOID' BRAND
MEDICINE CHESTS
AND CASES

Fig 4.8

ILLUSTRATIONS OF "TABLOID" AND

NO. 250 "TABLOID" BRAND MEDICINE CHEST

(As supplied to the late Sir H. M. STANLEY, EMIN PASHA, Military Expeditions, Missionaries, etc.)

Measurements: 15⅝ × 10½ × 8½ in. Weight, about 40 lb.

No. 250 Chest (Japanned Sheet-steel)

NO. 251 "TABLOID" BRAND MEDICINE CHEST

(As supplied to THE JACKSON-HARMSWORTH POLAR EXPEDITION, THE NATIONAL ANTARCTIC EXPEDITION, etc.)

Measurements: 15 × 10¾ × 8½ in. Weight, about 27 lb.

No. 251 Chest (Aluminium)

For particulars and prices, see B. W. & Co.'s Price List

24

Fig 4.9

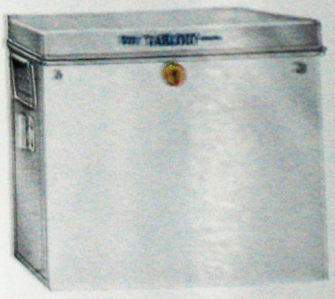
No. 284 "TABLOID" BRAND MEDICINE CHEST
(The Indian)

Ideal for missionary, expeditionary or itinerant use

Measurements:
9 × 6½ × 6½ in.

No. 284 Chest (Japanned Metal)

No. 286 "TABLOID" BRAND MEDICINE CHEST



Specially serviceable for small expeditions, etc.

Measurements:
10¼ × 5½ × 7½ in.

No. 286 Chest (Aluminium)

For particulars and prices, see B. W. & Co.'s Price List


'TABLOID' PHOTOGRAPHIC OUTFIT
No. 723 'TABLOID' BRAND FIRST-AID
(Registered)
Also supplied in Rex Red or Royal Blue Enamelled Metal, or in Aluminised Metal
Measurements:
8 × 5½ × 2¾ in.
No. 723 'Tabloid' First-Aid (Brewster Green Enamelled Metal)
No. 905 'TABLOID' BRAND PHOTOGRAPHIC OUTFIT
(Registered)
'TABLOID'
Also supplied in Rex Red, Royal Blue or Imperial Green Enamelled Metal
Measurements:
4 × 4 × 2½ in.
No. 905 'Tabloid' Photographic Outfit (Bright Scarlet Enamelled Metal)
For particulars and prices, see B. W. & Co.'s Price List
BURROUGHS WELLCOME & Co.
LONDON (ENG.)
NEW YORK MONTREAL SYDNEY
CAPE TOWN MILAN SHANGHAI
BUENOS AIRES BOMBAY
32

Fig 4.10

> After dinner we had a short discourse on the medicine bag which is to be given to each sledge party in the spring, explaining the use of what it contains. Then painted till bedtime. The light at midday was most cheering, the sky being absolutely cloudless, and the colour in the north perfectly beautiful.[666]

Wilson was in charge of the Boroughs & Wellcome Medicine Chest that accompanied the five men to the South Pole, and had been consulted on his return from the *Discovery* trip in 1901–1904 as to the most useful assembly of contents for further polar outfitting of medicine chests by Borroughs Wellcome & Co. In return for their sponsorship, Boroughs Wellcome & Co. expected their brand to be associated with Scott's Antarctica, potentially to be photographed and circulated in the form of a magic lantern show depicting promotional material.

Wellcome's Medical Diary and Visiting List was a handbook for doctors in which was listed a series of ailments and their corresponding treatments, with therapeutic notes on the drug dosages,[667] advice on poisoning[668] (the other side of the medicinal power to cure), diet tables,[669] urine and water analysis,[670] and the method for microscopic colour staining.[671] In the entire set of entries of this type, which cover a substantial number of pages from 11 to 194 of the book, Wilson has shown his interest by underlining, and taking special note of, only two sections. The first section he has underlined is the dosage details given under the section for 'Eucaine', 'equal to cocaine as an anaesthetic, and is less toxic',[672] and the second section is under 'Physostigmine [Eserine]' [673] listed for use on eye conditions:

> In painful disease of the eye, and in photophobia, it is used to diminish

666 Edward Wilson, *Diary of the 'Discovery' Expedition to the Antarctic Regions 1901–1904*, p. 166.

667 Therapeutic Notes in 'The Sledging Diary and Memoranda'. [on microfilm] (frame 8–103) p. 11- 194, then followed by Index of Diseases and their treatments (frame 103–24, p. 195–236.

668 Advice on poisoning in 'The Sledging Diary and Memoranda', [on microfilm] (frame 129–36/ p. 247–61).

669 'The Sledging Diary and Memoranda' [on microfilm] (frame 137–43/p. 263-74)

670 'The Sledging Diary and Memoranda' [on microfilm] (frame 143–48/p. 273-84)

671 'The Sledging Diary and Memoranda' [on microfilm] (frame 149–52/p. 287-91)

672 'The Sledging Diary and Memoranda' [on microfilm] (frame 34/p. 63)

673 'The Sledging Diary and Memoranda' [on microfilm] (frame 70/p. 133)

> entrance of light; for such purposes the combination with tropocaine provides additional anodyne power.[674]

The Wellcome text reads 'Physostigmine exerts a powerful myotic action, the maximum contraction being obtained in about twenty minutes'.[675] 'Myotic[676] action' refers to the constriction of the pupil, which reduces the amount of light that enters the eye. In highlighting to these two sections, Wilson seems to have been taking note of treatments for snow-blindness, the overexposure of eyes to ultraviolet light that leads to damaged corneas, pain and streaming tears: the dosage provides medicine for, on the one hand, treating the pain and on the other, treating the eye by encouraging it to reduce the entry of light. Wilson's diary entries across the two expeditions make reference to this recurring ailment.

> My eyes are the only thing that feel the worse for wear, and considering the trying nature of the light for so many months indoors and out of doors, I am not the least surprised.[677]

Wilson suffered from episodes of snow-blindness for some days during the polar journey.

In the therapeutic notes in Wilson's 'Sledge Journal to the South Pole', silver nitrate is listed as of use for 'ophthalmic purposes'.[678] The medical therapeutic notes instruct that: '"Soloid" Silver Nitrate should be dissolved in warm distilled water, which has been previously boiled and allowed to cool. If ordinary tap-water is used, much of the silver may be precipitated'.[679] In the Wellcome Medical Diary and Visiting List 1910, the entry under 'Silver Nitrate' indicates its use for treatment of the eyes:

> Used in general surgery, for urethral and ophthalmic purposes. ' SOLOID' Argentis Nitritis, gr. 1[6.065gm] Direction – In ulcers of the cornea, a strength from 2 to10 grams to the ounce is employed. In acute ophthalmia, a few drops

674 'The Sledging Diary and Memoranda' [on microfilm] (frame 70/p. 133)

675 'The Sledging Diary and Memoranda' [on microfilm] (frame 70/p. 133).

676 Miotic and myotic are the two spellings for this condition. Miotic, meaning constriction, and meiosis, meaning the splitting and recombination of genes in cell division, are derived from the same root word in Greek.

677 Wilson, *Diary of the 'Discovery'*. p. 166 [diary entry for 1 Aug 1902].

678 'The Sledging Diary and Memoranda' [on microfilm] (frame 84/p. 159).

679 'The Sledging Diary and Memoranda' [on microfilm] (frame 84/p. 159).

of a solution of 1 or 2 grains to the ounce may be used twice or thrice daily. [680]

The same chemical used for the treatment of eye conditions was also used in the production of photographic negatives and prints.

While researching the medical diaries in the archive at the Wellcome, I noticed that a catalogue had also been produced as a separate booklet with a printed cover in faux-fur to be distributed with the medical diaries (Fig 4.8). In it the Wellcome brand medical chests were advertised side by side with the kits for photographic chemical development (Figs 4.9 and 4.10). While in the Wellcome archive I was offered a box of Antarctic Expedition material to look through. With a kind of dazzled astonishment I came across a black and white photographic print (Fig 4.11).

It looked like Wilson but I did not immediately recognise him. I wondered why that should be. I considered it possible that having never met the man as a living, moving figure in space, my impression of him may have become concretised and limited to a small repertoire of images, many of which had remained screen based. What I knew, too, was mainly the black and white of those *specific* photos. In the Wellcome archive the photo that I was looking at was almost identical to another with which I was very well acquainted: the portrait by Ponting of Wilson painting a watercolour at the desk in the hut which had been digitised for the Freeze Frame online archive by the Scott Polar Research Institute (Fig 2. 16).[681] But this Wellcome image was different. What struck me first and foremost was that the actual silver wet-process print offered a degree of detail and brilliancy that was far better than the digital screen versions of archive photography. I was thrilled by the visibility of the detail. The print was about A4 size, and inside an archival sleeve and mounted on a piece of Winsor & Newton Fashion Plate Drawing Board. There was no individual archive entry for this accession and very little indication of what it was. On the back was written only 'Scott of the Antarctic'.

During my next visit to the Scott Polar Research Institute I took the opportunity to show this new find to the photography archivist there. I asked

680 'The Sledging Diary and Memoranda' [on microfilm] (frame 84/p. 159).

681 Herbert Ponting, 1911, *Dr E.A. Wilson working on a sketch* (glass plate negative, 7 inches by 6 inches). SPRI P2005/5/402

her if she was aware of this image. She said 'I only know what is in the archive, not what isn't' She said, 'It's not Wilson'. She did not recognise him either. 'Isn't it?' I responded. 'But look at the jumper. Look at the weave of the jacket. It is the same. He is wearing Wilson's clothes. He is painting one of Wilson's seal watercolours. This man has Wilson's ears'. But there were differences: this man's hair was more carefully brushed than the Scott Polar Research Institute archive image of Wilson. And the lamp was similar, but significantly not the same one as shown in the Scott Polar archive image. Another factor that had perplexed me was that in the Wellcome image there was a photograph of a woman on the desk that I did not recognise; it was neither Wilson nor Scott's wife. So who was she? How had she arrived there? But the oddest anomaly was that, in the Wellcome archive print, the watercolours were nowhere to be seen: Wilson is pictured here with the shiny medical case provided by Wellcome & Borroughs. The watercolour set pictured in the Scott Polar archive image had been replaced by the medicine chest, and the medicine chest was shown in use, but as if it were a box of paints. Why, I wondered, was Wilson pretending to paint with medicine?

Later I found the reason for the anomalies between the photographs in the Scott Polar Research Institute and Wellcome Library archives. While watching the 1948 film *Scott of the Antarctic* directed by Charles Frend, I noticed a sequence of scenes recreated from Ponting's photos. I now realised that the inscription on the back of the photograph reading 'Scott of the Antarctic' had referred to this film's title. There in the film I now saw 'Wilson' played by Harold Warrender at the oddly familiar desk but this time in brilliant Technicolor and acting the scene in which Wilson is painting. In the film 'Wilson' is more sensibly shown painting with a set of watercolours. I now understood that the black and white photographic print in the Wellcome archive that had so beguiled me was a shot from this film set. The print, I presumed, was given to the Wellcome archive in return for the loan of the Wellcome medical case as a prop for use in other scenes, and my guess is that in lieu of a more suitable episode from the film in which to show the case in use, the filmmakers had set up this scene. But the oddity still remained: in place of the watercolour set, the medicine chest had been substituted.

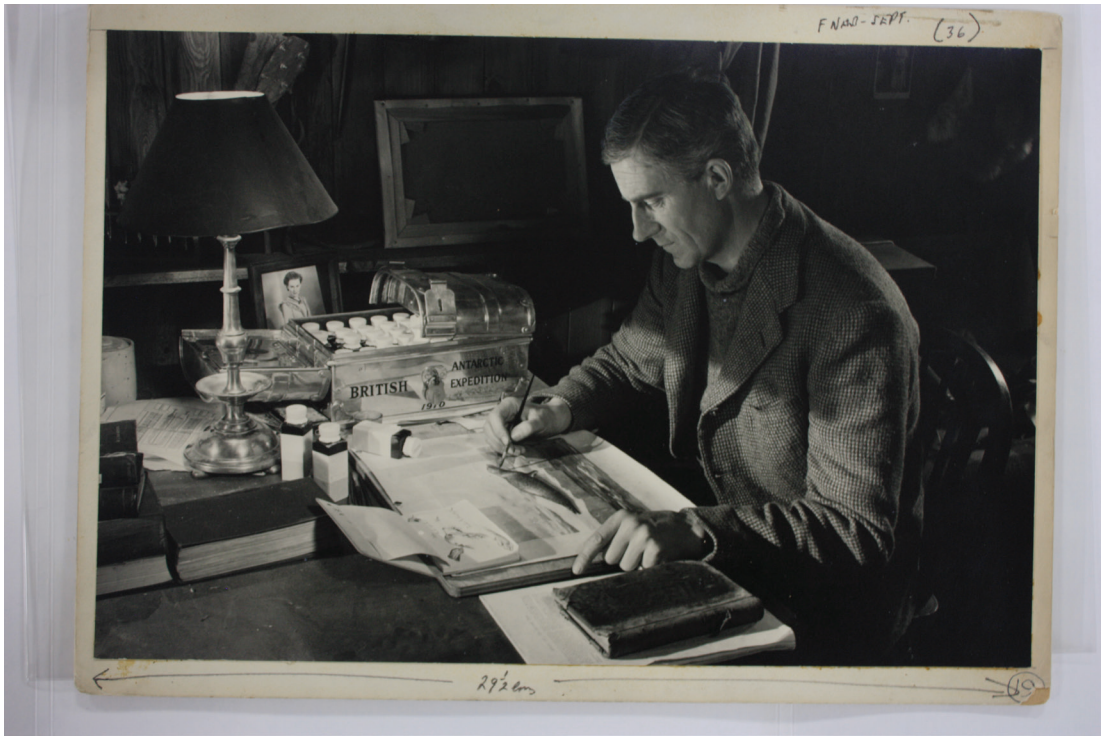


Fig 4.11

The first edition of *Notes and Queries on Anthropology: For the Use of Travellers and Residents in Uncivilized Lands* (1874)[682] included questions that would disclose how the other cultures represented their worlds in drawing. Under the section 'Drawing' the questions included an inquiry into the anthropological subjects' understanding of colour:

> What colours are employed? And how are they obtained? Have they any knowledge of shading? With what colours are the shadows made? And are they correctly placed?[683]

It is also recognised here that the anthropologist's interpretations of colour in the field may have been subjective.

> Even educated men differ widely as to the appreciation of colours and their nomenclature[…] It is therefore most desirable that information as to the colour of skin, hair, and eyes should be collected in a systematic manner, by comparing those of every individual observed with the standard tables formed by M. Broca, and reproduced in this manual by his kind permission.[684]

In this same edition, the reader will find a printed insert between pages eight and nine that was meant as an aid in making standardised observations in the collection of data on the eye, skin and hair pigmentation of the uncivilised people in question.[685] The colour charts were devised by M. Broca, and printed by W. Griggs Photo Lithograph, London S.E. All in all, forty-eight colours were sampled. Eye-colour was treated with ghastly eyeballs stuck onto a grid running four by five: brown, khaki, green, hazel, and fleshy pink (Fig 4.12). For all appearances like the artist's colour chart of Winsor & Newton, the colour sections for the skin are printed upon individual rectangular pieces of paper, which are then stuck onto the double page next to a number (Fig 4.13). This was a form of colour coding included to support observation and data collection of racial ethnographic types. It was intended to help in the gathering of objective data.[686] A few years after the first edition, Pitt-Rivers, who had

682 *Notes and Queries,* 1st edn

683 Lane Fox 'Drawing', in *Notes and Queries,* 1st edn, pp. 118–20.

684 *Notes and Queries,* 1st edn, p. 8-9.

685 *Notes and Queries,* 1st edn, p. 8–9.

686 *Notes and Queries,* 1st edn, p. 8–9.

contributed to *Notes and Queries*, volunteered to pay for the necessary reprint.[687] One of the pressing reasons noted for the reprint was that the printed colour table for making skin colour assessments in the field had proved unstable, and was in need of updating. Regarding the proposed reprint the *Report for the British Association for the Advancement of Science,1890,* stated that:

> Some delay has been caused by the difficulty of obtaining satisfactory coloured plates for standards of colour of hair, skin, and eyes. Those in the previous editions, it has been found, lost colour rapidly, even when not exposed to the light. As these standards are necessarily exposed to a considerable extent where the book is in constant use changes take place more rapidly hence the results obtained from them are liable to be very fallacious. The desirability of obtaining standard colours which are less liable to deteriorate is most important, and it is hoped the difficulties hitherto met with on this score may be overcome.[688]

Some of the pigments used to print the chart had faded beyond recognition.[689] Rather than providing a standardised measure by which to record an ahistorical fact of nature, the colour chart had become unstable: the colours were fugitive.

Within a few decades, the work of Boas on human type and race was also to speak, but rather more directly, against the idea of the permanence of race as a fixed type. In an article titled 'Changes in the Bodily Form of Descendants of Immigrants', presented to Congress in Washington in 1911, Boas affirmed that his results were:

> so definite that, while heretofore we had the right to assume that human types are stable, all the evidence is now in favour of a great plasticity of human types, and a permanence of types in new surroundings appears rather as the exception than as the rule.[690]

The point that Boas makes is that race is not a fixed or stable entity. Race is contextually dependent: colour is not fixed but fugitive. I see that the fading colour of pigments in the colour chart and Boas's critique of racial typology are

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687 The British Association, *The Times*, 5 September 1887, 32169, p. 10.

688 British Association for the Advancement of Science (BAAS), *Report for the British Association for the Advancement of Science* (1890), pp. 547–48 (London: John Murray, 1891), p. 547.

689 Alison Petch, 'Notes and Queries and the Pitt Rivers Museum', *Museum Anthropology,* **30** (2007).

690 Boas, quoted by Stocking in *Race, Culture and Evolution: Essays in the History of Anthropology,* p. 179. From 'Changes in the Bodily Form of Descendants of Immigrants', Senate document 208, 61st Congress, 2nd Session (Washington, 1911), pp. 1–7.

connected in that for Boas the racial types that the *Notes and Queries* colour chart had been intended to assess were themselves as fugitive as the printed pigments on the page.

COLOUR-TYPES OF M: BROCA.
EYES
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W. GRIGGS PHOTO LITH. LONDON. S. E.

Fig 4.12


COLOUR-TYPES OF M. BROCA.
HAIR & SKIN
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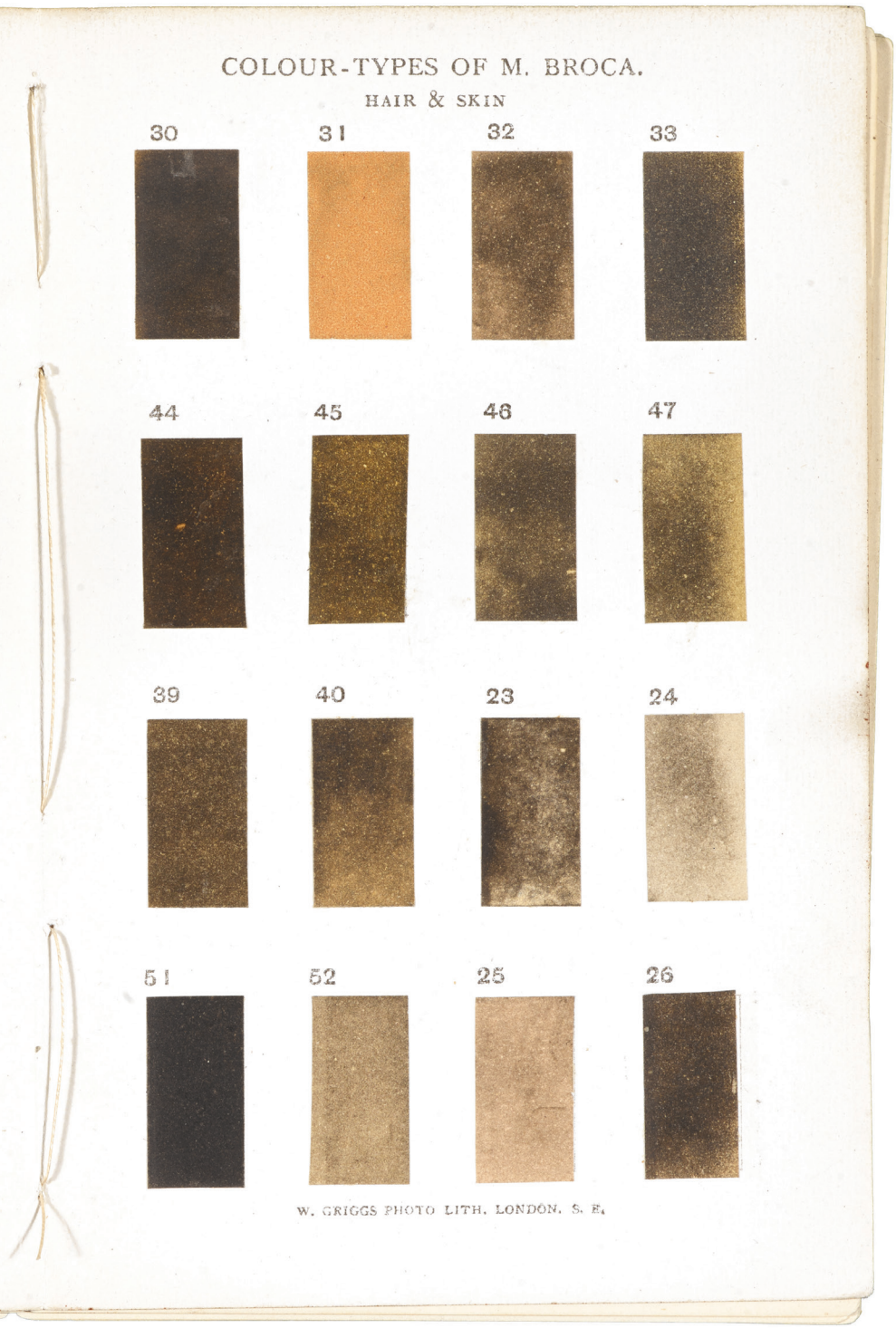
W. GRIGGS PHOTO LITH. LONDON. S. E.
230C83
MUSEUM

Fig 4.13


COLOUR-TYPES OF M. BROCA.
HAIR & SKIN
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W. GRIGGS PHOTO LITH. LONDON. S. E.

Fig 4.14

Boas spoke out against the typological arrangement in museum displays and the teleological notion of racial progress with which this seemed to be associated. Boas's suggested remedy in terms of innovation in museum display was the life group display or diorama.[691] But understanding that he was currently failing to achieve convincing realism with the life groups, Boas wrote in a letter to Frederic Putnam,[692] Curator of the Peabody Museum, and curator of the American Museum of Natural History in New York from 1894 –1903:

> It is an avowed object of a large group to transport the visitor into foreign surroundings. He is to see the whole village and the way the people live. But all attempts at such an undertaking that I have seen have failed, because the surroundings of a Museum are not favorable to an impression of this sort. The cases, the walls, the contents of other cases, the columns, the stairways, all remind us that we are **not** viewing an actual village, and the contrast between the attempted realism of the group and the inappropriate surroundings spoils the whole effect.[693]

What Boas was trying to do was represent these transposed objects in their context as they shift from the site of the field to that of the museum display. I suggest that the ambition that Boas had to then 'transport the visitor'[694] can be compared to transposition, in that the cultural objects are transposed into the space of the museum, in order to then transfer the viewer elsewhere. I also suggest that the challenge faced by museum displays in presenting objects in relation to an original context is comparable to the problem posed by *ekphrasis*. This comparison to the rhetorical device of *ekphrasis* allows us to further the simile and consider the artefacts as 'texts' that are 'out of context'; and so, with

691 Ira Jacknis, 'Franz Boas and Exhibits: On Limitations of the Museum Method of Anthropology', in *Objects and Others: Essays on Museums and Material Culture,* p. 76.

692 Alfred M. Tozzer, 'Biographical Memoir of Frederic Ward Putnam 1839–1915', *National Academy of Sciences, Biographical Memoirs,* vol. 16, 4th memoir. (Washington, D.C.: National Academy of Sciences, 1933), pp. 136-37. <http://www.nasonline.org/publications/biographical-memoirs/memoir-pdfs/putnam-frederic.pdf> [29 July 2014].

693 Cambridge, Mass., Harvard University Archives (HUA). Franz Boas in Frederic Ward Putnam Papers. Correspondence. Franz Boas to Frederic Ward Putnam, 11/7/96, cited in Ira Jacknis, 'Franz Boas and Exhibits: On Limitations of the Museum Method of Anthropology', p. 101.

694 Franz Boas in Frederic Ward Putnam Papers. Correspondence. Franz Boas to Frederic Ward Putnam, as cited in Ira Jacknis, 'Franz Boas and Exhibits: On Limitations of the Museum Method of Anthropology', p. 101.

this comparison, on the one hand, to consider the difference between the quotation, or, on the other hand, the 'citation' of cultural objects.

Boas continued with some ideas as to how he would like to improve upon what he had identified as the current failings in display techniques:

> In order to set off such a group to advantage it must be seen from one side only, the view must be through a kind of frame which shuts out the line where the scene ends, the visitor must be in a comparatively dark place while there must be a certain light on the objects and on the background. The only place where such and effect can be had is in a Panorama Building where plastic art and painting are made to blend into each other and where everything not germane to the subject is removed from view. It cannot be carried out in a Museum Hall.[695]

Boas tried to create context with forest-like displays and dark painted walls, using mannequins to demonstrate the proper use and display of clothing or jewellery, plaster busts to indicate racial features, and the life group to show people engaged in some kind of activity. According to the anthropologist Ira Jacknis,

> For Boas the primary purpose of life groups was to catch the viewer's attention and direct it to more specific exhibits.[696]

Boas's involvement in displays for The Chicago World's Fair 1892 included creating dioramas of living native people, such as the Kwakiutl hamatsa diorama, later produced with mannequins, yet Boas was against the deathly mimetic waxwork,[697] finding them uncanny in their frozen stillness.

In *Modest_Witness@Second_Millennium.Femaleman©_Meets_Oncomouse™* Donna Haraway discusses race and the gorilla group diorama in the African Hall of the American Museum of Natural History.[698] Haraway acknowledges that 'in the early twentieth century Franz Boas and social-cultural anthropology more broadly were laying the foundations for a

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695 Franz Boas in Frederic Ward Putnam Papers, Correspondence, as cited in Ira Jacknis, 'Franz Boas and Exhibits: On Limitations of the Museum Method of Anthropology', p. 101.

696 Jacknis, 'Franz Boas and Exhibits: On Limitations of the Museum Method of Anthropology', p. 100.

697 Barbara Kirshenblatt-Gimblett, 'Objects of Ethnography', in *The Poetics and Politics of Museum Display,* ed. by Ivan Karp and Steven D. Lavine (Washington; London: Smithsonian Institution Press, 1991), p. 401.

698 Donna Haraway, *Modest_Witness@Second_Millennium. Femaleman©_Meets_Oncomouse™* (New York; London: Routledge, 1997), pp. 232–37 (hereafter Modest_Witness)

different epistemological order for thinking about race'.[699] Boas's wish to show these people's world and lives in context avoided the reductive violence of a typological display.

As much as Boas's thinking supported a fugitive idea of race, some of his display practices were quite the opposite. There is a disturbing aspect to Boas's museum practice that generated violence of another kind. Boas had requested that the explorer Robert Peary should seek to bring back a middle-aged Eskimo[700] to New York from his expedition to Greenland.[701] In 1897 in New York, Boas, at that time busy with more important matters put his student, Alfred L. Kroeber,[702] in charge of the six displaced Eskimos with whom Peary had returned and who were, for a time, displayed as exhibits in the museum. Four of the group quickly succumbed to tuberculosis after their arrival in New York, and died.[703] The surviving boy, Minik, whose father had died, was adopted by a museum worker, and was later to be involved in a protracted and difficult campaign to retrieve his father's bones from the museum, as well as an attempt to find passage home on a later expedition led by Peary himself.

Like a model for a geography lesson, *Lantern Landscape* 2013 is an art work I made of three wax maquettes of topographical features each derived from the single view of a scene in Wilson's watercolours (Figs 4.14 & 4.15). *Observation Hill from Hut Point* 1911 and *Berg off Cape Evans* 1911 (Fig 3.18) were two of the reference paintings I used. I modelled the version of the scene in wax, to be seen from one point of view. I then painted the wax models in similar colours as in the on-screen archive image or book publications of the Wilson watercolours to which I referred. I decided to create raked stages as you might find in the theatre, to compensate for the receding horizon. The discarded copies from the process of making *Suiseki Bergs* (Fig 1. 7) supplied the clear glass forms that I placed upon the little stages behind the wax maquettes.

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699 Haraway, *Modest_Witness,* p. 233.

700 I am using the term 'Eskimo' as used by Boas and Peary at the time.

701 See *The Prize of the Pole*, a film by Staffan Julén, 78 minutes (New York: First Run/Icarus Films, 2006). It tells the story of Peary, Minik and Boas.

702 A.L. Kroeber, 'The Place of Boas in Anthropology', *American Anthropologist,* **58**, 1 (1956), pp. 151–59, p. 153.

703 Kenn Harper, *Give Me My Father's Body: The Life of Minik, the New York Eskimo* (South Royalton, Vermont, Steerforth Press, 2000 [1986]).

I then set up a magic lantern with an empty circular lantern-slide holder in the gate to project a circle of light upon the set-up. The light threw a ghostly shadow landscape onto the back wall. Here the forms of the wax maquettes were amplified and displaced into a further landscape of shadow, in addition to another horizon line of shadow and refraction from the glass.

Fig 4.15

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Fig 4.16

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Fig 4.17

As a boy, in a letter to his mother, Wilson wrote:

> What I should like *better than anything* would be to have the Bee closet for my own room if you could manage it. I could work and play in there and keep my things, cabinet, aquarium, and Natural History books.[704]

After some years of entreaty he achieved this wish and commandeered the space, no more than six by four feet in dimension, to establish his own natural history display at home in the Crippetts, which he kept from then on as a 'private museum and studio'.[705] Later in life, he occupied his rooms at Cambridge University more like a curator amongst a collection than a home. "'His rooms" wrote a friend "were like the man, and resembled a museum rather than a dwelling place"'.[706] In death Wilson found further housing in a museum, the room dedicated to his display at the Cheltenham Art Gallery and Museum in 2010 being not much larger than his first Bee closet museum.

Just as Wilson had a boyhood wish to find a home for his natural history collection, Pitt-Rivers also had ambitions for housing his typological collection. Pitt-Rivers proposed that in order to fulfil an educational purpose a certain kind of architecture was required:

> Not only must the objects be specially selected and arranged for the purpose, but the building must [also] be adapted to the proper display of them.[707]

The ideal design was to be a rotunda of concentric circles with the chronology moving outwards, from earliest time, located at the absolute centre, awaiting the discovery of 'tertiary man', to Palaeolithic man on the smallest innermost circle, to the contemporary times positioned at the outermost edge.[708] The artefacts were to be displayed in an evolutionary arrangement, like an ever-expanding circular wave of progression from an initiating point of origin. Pitt-Rivers did allow for the idea that segments of the circle might represent geographical areas, providing that neighbouring parts would show 'civilisations

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704 George Seaver, *Edward Wilson Nature-Lover*, p. 3.

705 Seaver, *Edward Wilson Nature-Lover,* p. 4.

706 BMJ Obit 1913, Cambridge, cited in Seaver, *Edward Wilson Nature-Lover*. p. 23.

707 Pitt-Rivers, 'Typological Museums'. p. 117.

708 Pitt-Rivers, 'Typological Museums', p. 117.

in the same stage of development'.[709] To facilitate the mobility that this necessitated on the micro level of the museum, Pitt-Rivers suggested that 'cases might, perhaps, be put on wheels'.[710]

In 1889 Pitt-Rivers acknowledged that his vision for a purpose-built architecture to house his typological arrangement might be a far off dream, but Pitt-Rivers realised that the organisational principle he had suggested could function above and beyond the limits of a particular architecture. This could be achieved, he suggested, by 'incorporation of all Local Museums in the Country into one vast Rotunda, without moving them from their localities, simply by an organisation to facilitate the interchange of specimens'.[711] In addition, by allowing for one or two cases in each local museum to present his typological arrangement as an example, the disorder of the rest of the collection might be recognised. A feature of this model for typological arrangement was its translatability. His typology was to be flexible, Pitt-Rivers argued, in order to allow for the increase of knowledge and the demands of further rearrangements, not for the sake of sheer novelty. As a bad example, Pitt-Rivers notes the 'insufficiency of the arrangement' and its inadequacy for educative purposes at the museum of South Kensington.[712] Pitt-Rivers quotes a friend's description of the curatorial vision as a 'kaleidoscope arrangement', an intentionally disordered regular shifting of the position of the objects so that they would appear entirely new by virtue of their reconfiguration, and thus 'keep the turnstile going at the door'.[713] Pitt-Rivers contrasted this disorder with his typological rotunda, which in contrast to disorder, illustrated the march of progress.

> Any visitor who wished to know the place in Art or Nature, of the subject he was studying…would simply notice his position, with reference to the centre, and the circumference of the Rotunda.[714]

As one might read the degrees of latitude and longitude in order to find

709 Pitt-Rivers, 'Typological Museums', p. 117.

710 Pitt-Rivers, 'Typological Museums', p. 117.

711 Lane Fox, 'On the Uses and Arrangement of Arts Museums 1889–1890', para. 36/39.

712 Lane Fox, 'On the Uses and Arrangement of Arts Museums 1889–1890', para. 10/39.

713 Lane Fox, 'On the Uses and Arrangement of Arts Museums 1889–1890', para. 10/39.

714 Lane Fox, 'On the Uses and Arrangement of Arts Museums 1889–1890', para. 35/39.

one's place on the surface of the earth, so too can the Pitt-Rivers typology be translated into coordinates for finding one's place within a circular display that then represented the history of civilisation's progression.

Pitt-Rivers described his hopeful confidence in his design in his correspondence with Professor Flowers of the South Kensington Museum of Natural History, who had shared his own thoughts on the suitability of concentric arrangements for the evolutionary display of natural history.

> I have no doubt, therefore, that eventually this idea of concentric arrangement will be carried out, and that we shall have somewhere in the metropolis two large rotundas – one for natural history, and the other for the arts of life.[715]

No plans were contemplated to realise the vision of the rotunda until over half -a-century had passed. In the late 1960s, there were efforts in place to secure a design and funding for a new museum to house the Pitt Rivers collection in Oxford. This new museum was to be joined to a proposed centre for the study of anthropology and human environment at the University of Oxford.[716] Pier Luigi Nervi, known for creating domes with his innovation of using in concrete formwork with support structures of steel, was invited to join with the Messrs. Powell & Moya of London, to produce a design (Fig 4.16).[717]

The Nervi solution to typological arrangement may have prioritised the geographical more than the typological, but in fact, although Pitt Rivers's design was evolutionary there were aspects of his arrangements that tended towards the geographical in their distribution: the segments were designated as geographical regions (Fig 4.17).[718] Writing on this Nervi dome architecture for a display of the Pitt-Rivers collection, Stocking describes how it reconciled typology and topology, particularism and generalisation, to produce both linear

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715 Pitt-Rivers, 'Typological Museums', pp. 117–18

716 Pier Luigi Nervi and Pitt Rivers Museum, *The New Pitt Rivers Museum and Proposed Centre for the Study of Anthropology and Human Environment* (Oxford: University of Oxford, c.1969); hereafter Nervi, *The New Pitt Rivers Museum.*

717 Nervi, *The New Pitt Rivers Museum.*

718 William Ryan Chapman, 'Arranging Ethnology: A.H.L.F. Pitt Rivers and the Typological Tradition', in *Objects and Others: Essays on Museums and Material Culture*, pp. 15–48.

and circular pathways through the ethnographic artefacts.[719]

A hard-covered spiral-bound book of plans and drawings, containing the model's rationale, specifications, construction details, and newspaper articles about the Nervi dome proposal was produced by the architects for the University of Oxford in 1967.[720] In this book of plans, an unnamed author writing on behalf of Oxford University in the mid-sixties spoke in favour of the Nervi design by describing the innovations and advances that it represented.

> The principles of ecology are usually introduced into museum displays by means of dioramas or other visual aids. But plant house design had recently so advanced that living ecological exhibits can now be planned to provide a completely new dimension in museum display technique. [721]

One particular advantage noted was how the design showed environment as nature, via a domed climate:

> The dome which covers the plant house is bee-hive shaped and consists of a lattice of structural members supporting the roof glazing.[722]

Recalling the bee closet that the young Wilson occupied with his collections as a boy, this dome was described in a newspaper article in 1968 as 'the gleaming beehive dome'.[723]

Pitt-Rivers's arrangement was effective until one meets the central point – what could one place here in this ethnographic order? What do you put at the zero pole point of a typological system? Pitt-Rivers proposed that:

> In the innermost circle I would place the implements and other relics of the Palaeolithic period, leaving a spot in the actual centre for the relics of tertiary man, when he is discovered.[724]

With an anticipatory retrospection, Pitt-Rivers demonstrates the closed vision of the typological system that preordains the future discoveries of the past: the

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719 George W. Stocking, 'The Spaces of Cultural Representation, Circa 1887 and 1969: Reflections on Museum Arrangement and Anthropological Theory in the Boasian and Evolutionary Traditions', in *The Architecture of Science* (Cambridge, Mass; London, England: The MIT Press, 1999), pp. 165–80.

720 Nervi, *The New Pitt Rivers Museum.*

721 Nervi, *The New Pitt Rivers Museum,* p. 11.

722 Nervi, *The New Pitt Rivers Museum,* p. 13.

723 Nicholas Taylor, *The Sunday Times*, 17 March 1968. Reprinted in Nervi, *The New Pitt Rivers Museum,* p. 51.

724 Pitt-Rivers, 'Typological Museums', p. 117.

primeval man, missing at the centre. In terms of the ethno-geographic locations that were represented by Pitt-Rivers's museum of ethnography, the Antarctic is an empty set: an entire continent that is without a human history, bar that of a few explorers, some nineteenth-century whalers, a growing smattering of tourists, and a cohort of scientists. However, if we take a post-human view, the position that is held vacant at the centre, the zero value of the typological arrangement, would not be taken by any human and would not anticipate the yet to be discovered original 'ur-man' that Pitt-Rivers imagined would complete his collection at some point in the future. In examining the plans for the building of the Nervi Dome, I see that the central area is occupied by the tropical and subtropical garden (Fig 4.18 & 4.19). I notice drawn on the plans, at the centre of the domed garden, where the empty set would be, the ventilation core supporting the circulation of air and the regulation of the atmosphere.

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Fig 4.18

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Fig 4.19

The Weather Twenty-first-century Storm Cloud

The first university lectures in anthropology in the United Kingdom were given at Oxford University by Edward Burnett Tylor in 1883. The never-to-be realised Nervi plan for the new Pitt-Rivers museum in Oxford was argued for, at the time, as being a way of supporting another disciplinary innovation: the newly established undergraduate studies department, titled the Human Sciences, that would reconcile the sciences and humanities. The new department was conceived of as supporting necessary research addressing what were identified as the pressing global challenges in the late 1960s. According to one spokesperson for the university writing in *The New Pitt Rivers Museum* spiral-bound book of the proposal, this new department was being established 'at a time when some of the world's major problems, such as race relations, population growth and environmental pollution, lie in the area of the human sciences'.[725] The looming threat of the 'world's major problems' described by the commentator above echoes Ruskin's sentiments in *The Storm Cloud of the Nineteenth Century*.[726]

Just as architecture was invoked by Pitt-Rivers to service the clear exposition of his typological system and its progressive vision, so too, according to this commentator, would architecture facilitate the cross-disciplinary establishment of a new undergraduate programme to address this twentieth-century storm cloud. The other aim described in *The New Pitt Rivers Museum* was to unite the different disciplines and departments of the Human Sciences: the construction of the Nervi design would bring disciplines together.

> Academic departments which are concerned with anthropological and archaeological studies are, at the moment, scattered, mostly in temporary quarters, in different parts of Oxford, sometimes divided between two or more buildings, and the Institute of Social Anthropology, for example, has had to move several times in recent years.[727]

It seems somehow fitting that the Social Anthropologists should have been

725 Unnamed author in Nervi, *The New Pitt Rivers Museum,* p. 53.

726 John Ruskin, *The Storm Cloud of the Nineteenth Century: Two Lectures* (Orpington, Kent: G. Allen, 1884), p. 137.

727 Nervi, *The New Pitt Rivers Museum,* p. 9.

especially nomadic. Their itinerant housing in various university buildings reflects the fluid status of the discipline as less territorially established and more open to other disciplines. Nomadic culture and practices would certainly have come within the scope of the Social Anthropologists at this time.

A disciplinary nomadism seems now even more necessary for addressing current pressing matters. Rosi Braidotti describes her own nomadic theory as 'a process ontology that privileges change and motion over stability'.[728] In seeking out Braidotti's *Nomadic Subjects*[729] in the local bookshop in the philosophy section, I discovered that their copy had gone astray. I was directed to the Anthropology section, and found myself giving the assistant a précis for classification purposes. I say – 'It is philosophy and feminism, yes, it is anthropology of a sort but onto-anthropology in the form that philosophers might grapple with; the condition for the coming into being of the human being, rather than an ethnography of nomadic tribes people'. The term nomadism as used by Braidotti is a productive metaphor with which to disperse the unitary subjectivity of white, male, western man.[730] Braidotti, writing on the post-human, describes the time of the Anthropocene and the geo-morphism that it has generated, as having the positive consequence of 'reconfiguring the relationship to our complex habitat, which we used to call "nature"'.[731] Braidotti identifies the global environmental issue as 'immanent' for all other issues as it is their medium, what Braidotti describes as their 'milieu':

> The planet opens onto the cosmic in an immanent materialist dimension. My argument is that, again, this change of perspective is rich in alternatives for renewal of subjectivity. What would a geo-centred subject look like?[732]

Ruskin had figured as a storm cloud the changes in the observable weather wrought by industrialisation and seen this as the pressing threat of the nineteenth century.[733] Today, a cross-disciplinary approach will be the required

728 Rosi Braidotti, *Nomadic Theory: The Portable Rosi Braidotti,* p. 29.

729 Braidotti, *Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Theory*.

730 Braidotti, *The Posthuman,* pp. 49, 87, 164.

731 Braidotti, *The Posthuman,* p. 81.

732 Braidotti, *The Posthuman*, p. 81.

733 John Ruskin, *The Storm Cloud of the Nineteenth Century: Two Lectures* (Orpington, Kent: G. Allen, 1884).

method for addressing climate change, the storm cloud of the twenty-first century. Braidotti has discussed the need for the humanities to overcome some of the traditional divisions between disciplines in order to address the issue of climate change. Braidotti writes of 'the collapse of the divide between human and natural histories as a very recent phenomenon and, prior to this fundamental shift, geological time and the chronology of humans were unrelated, at least within the discipline of history'. It is the 'changes in scale' and the 'mental shifts required'[734] in thinking about climate change that are what, Braidotti writes:

> forces us to bring together categories of thought which were until now kept apart not only by disciplinary boundaries – between the earth sciences and history and literature, for instance- but also by the anthropocentric bias that has sustained the humanities.[735]

Feminist epistemologist Lorraine Code proposes that to deal with the threat of climate change requires a change in thinking, so that we are not just thinking *about* ecology but thinking ecologically: what must change, she argues, are our very methods of knowledge production, as well as the matter towards which our attention is turned.[736] What is needed, Code says, is an ecological thinking that will *think* the implication of the human *with* the climate rather than a study of the human *and* climate.

> Assuming no such separations, ecological thinking relocates inquiry 'down on the ground' where knowledge is made, negotiated, circulated; and where the nature and conditions of the particular 'ground,' the situations and circumstances of specific knowers, their interdependence and their negotiations, have claims to critical epistemic scrutiny equivalent to those of allegedly isolated, discrete propositional knowledge claims; in its approach to knowledge it works with affinities, analogies from location to location, imaginatively and interpretively discerned. Yet the practice-dependent communicative, deliberative processes of negotiation from which knowledge, on this model, is made and remade, its critical reflexivity, and its grounding in the 'givenness' of the physical, historical, corporeal Lebenswelt, guard against the subjectivism and/or relativism that have deterred philosophers from granting epistemic significance to place, particularity, imagination, and interpretation.[737]

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734 Braidotti, *The Posthuman*, p. 160.

735 Braidotti, *The Posthuman*, pp. 160–61.

736 Lorraine Code, *Ecological Thinking: The Politics of Epistemic Location* (Oxford, New York: Oxford University Press, 2006); hereafter *Ecological Thinking*

737 Code, *Ecological Thinking*, p. 5–6.

Code points out that ecological thinking will not automatically bypass the problem of an epistemology of mastery, as ecological systems can be vastly ranging in their qualities, cruel or kind, overwhelming or sympathetic. Nonetheless, Code writes that:

> An epistemological position whose starting point is in the ecological situations and interconnections of knowers and knowings – be they benign, malign, or merely equivocal – departs radically from inquiry directed toward analysing discrete, disparate beings, events, and items in the world, only subsequently to propose connections among them or to insert them into 'contexts' conceived as separately given.[738]

Braidotti also notes that, 'there exists a dominant mode of nomadism in western culture – in the form of epic journeys of discovery, which find their apogee in colonialism'.[739] Braidotti writes that 'death is overrated'[740] displacing the tragic finitude from such epic journeys as those undertaken by Wilson and his colleagues. Braidotti brings her own version of a method of nomadism and transposition to counter this epic form of colonial journey. I take Braidotti's use of transposition and add to it my method of refraction in order, following Code, to think ecologically, so that the narrative of polar exploration can be rethought, rewritten as a chiasmus into a pattern in which death is not the end point but only a moment in a cycle.

738 Code, *Ecological Thinking*, p. 67.

739 Braidotti, *Transpositions*, p. 68.

740 Braidotti, *Transpositions*, p. 40.

Fig 4.20

A Lecture on Sketching Participant Observation

Boas's thinking in anthropology worked against the prior establishment of categories and types, and advocated a contextual and historical view of human culture. Boas seemed to suggest that it was the tools or techniques of quantitative measurement and observation that were not adequate to the task of revealing the nature of things, not that observation per se was an inadequate method. Boas was committed to the role of observation in the field but developed a qualitative and engaged, reflexive mode of participant observation in which prolonged contact and immersion in cultural practices, combined with self-reflection, were integral to the method of observation (Fig 4.20).

Kroeber, Boas's student, who had taken charge of the Peary Eskimos, wrote of Boas:

> I do not know what strange parsimony, austerity, or inner compulsion made Boas so chary of adding interpretations. My best guess was that it was a perverse dread of unscientific subjectivity.[741]

But this belittles the very nuanced and qualified justifications that Boas had for avoiding the casual appeal of interpretation. Much of his life's work had focused on exposing the consequences of the lack of attentiveness to the distortions that interpretation wrought upon observation. One of the foundational texts he wrote on this was 'On Alternating Sounds'.[742] In this essay Boas debunked the view that primitive people were likely to switch between different sounds for the same word, treating this as a measure of the retarded development of their language.[743] Rather Boas turned the failing back upon the observer and said that this alternation of sound was actually a consequence of the apperception of the listener: the shortfall was in the western anthropologist who could not recognise a sound outside his or her

741 Kroeber, 'The Place of Boas in Anthropology', p. 152.

742 See Boas, 'On Alternating Sounds', in *A Franz Boas Reader: The Shaping of American Anthropology, 1883–1911*, pp. 72–77, and Boas, 'The Measurement of Variable Quantities'.

743 Boas, 'On Alternating Sounds'.

own language experience.[744]

According to the anthropologist Jason Throop, the methodology of participant observation so often promulgated by ethnographers enacts an oscillation between distanced observation and implicated involvement.[745] Opportunity arises when ethnographers are confronted with the limits of their ability to understand those others and events with which and whom they interact. Throop describes a 'nontrivial transformation in subjectivity' that comes about when 'anthropologists engage in a form of phenomenological modification in which we no longer take our own understanding of what is true, good, and beautiful to be self-evident'.

> There is in fact a distinctive type of subjectivity that is engendered through practices of observing and interacting with others, all the while, recurrently facing the need to seek out meaning when confronted with the palpable failures of one's own interpretive frames.[746]

Ethnographic encounters can then mutually enact something comparable to an anamorphic distortion, in which the grid system of one world view must be overlaid upon another, in the process revealing insights that are made possible by the transformation of view points.

Code writes of ecological thinking as 'participatory and ethical'.[747] The subject and agent of this thinking 'is self-critically located within a social-physical world that constrains and enables human practices, where knowing and acting always generate consequences'. This ecological thinking has 'a transformative potential'.[748] It can offer an interpretation that modifies our perceptions of the human in the environment, blurring the distinction between subject and object.

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744 This recalls Mary Douglas's comment on western readers' failure to recognise the chiastic structure of a narrative and therefore to think that the writer or speaker is less than bright. Douglas, *Thinking in Circles: An Essay on Ring Composition*,. x. (See this in thesis section X in Chapter Three).

745 C. Jason Throop, 'On Inaccessibility and Vulnerability: Some Horizons of Compatibility between Phenomenology and Psychoanalysis', *Ethos,* **40,** 1, pp. 75–96 [14 March 2012] <http://www.anthrosource.net.libproxy.ucl.ac.uk/Abstract.aspx?issn=0091-2131&volume=40&issue=1&doubleissueno=0&article=326835&suppno=0&jstor=False&cyear=2012,>, p. 85. Here after 'On Inaccessibility and Vulnerability'.

746 Throop, 'On Inaccessibility and Vulnerability', p. 86.

747 Code, *Ecological Thinking,* p. 5.

748 Code, *Ecological Thinking*, p. 5.

Participant observation leads us back to a similar question, concerning the perception of colour, with which Boas began his career. Boas found race not to be some stable essence of colour, of pigment present in skin that gets extrapolated into racial categories. This critical understanding originated in his doctoral research, *Contributions to the Understanding of the Colour of Water.*[749] I have chosen, by transposing watercolour into the 'colour of water', to refract further associations between Boas's anthropological thinking and Wilson's watercolours. Colour is sensuous and its perception undermines the unified detached subjectivity of the body as observer of the world, rather realising the body as fully implicated in the world. In a similar vein, anthropologist Michael Taussig credits colour with playing a part in the development of a 'world-centred' rather than 'self-centred' subjectivity. Taussig writes on colour in a way that allows me to connect it back to water, to the water in our watercolour as datum, to the water of the sea that is the datum for the maps that direct explorers, allowing me to make an argument for colour and water as 'in cahoots'. Taussig argues that the perception of colour encourages us to exchange a unified detached subject position for 'some quite other position that is not really a position at all but something more like swimming, more like nomads adrift in the sea…'[750] Colour has fugitive and fluid properties for Taussig. Colour is the protagonist in generating a new, fluid, nomadic, non-centred, non-unitary subjectivity.

749 Franz Boas, *Beiträge Zur Erkenntnis Der Farbe Des Wassers*.

750 Taussig, 'What Is the Color of the Sacred?', *Critical Inquiry,* **33**, 1 (2006), pp. 28–51 p. 31.

Fig 4.21

> We live in a culture which is practically unable to speak about the most manifest, about the fundamental clearing, about the atmospheres in which we live – unless this is done in the form of a crude distinction between good and bad ambiences.[751]

Sloterdijk's 'Air/Condition' chapter in volume 3 of the Spheres Trilogy[752] describes his Spheres project as an exploration of 'microclimates' that builds on Heideggerian theories of dwelling and the condition for being.[753] He quotes Irigaray's *L'Oubli de l'Air chez Martin Heidegger*.[754]

> Es ist nicht das Licht, welches die Lichtung schafft, vielmehr gelangt das Licht hierher nur dank der durchscheinenden Leichtigkeit der Luft. Es setzt die Lluft voraus.[755]
>
> It is not the light, which creates the clearing, rather the light achieves this thanks to the transparency of the air. It presupposes the air.[756]

Yet to be translated into English, I attempt to read Sloterdijk and find myself translating Irigaray from German into English, a text that has already been translated from the French, and from her French observations of a German writer. Irigaray rethinks the elements earth, air, fire, and water in Western metaphysics in a series of books that explore these elemental works in which through each of the four elements she explores a particular philosopher's writing to expose the elision of woman in their philosophies. The first two of these address water as the element in the *Marine Lover of Friedrich Nietzsche* and air as that in *The Forgetting of Air in Martin Heidegger.*[757] In her re-reading of Heidegger, Irigaray, whose project is to repair the 'forgetting of being' in

751 Peter Sloterdijk and Hans-Jürgen Heinrichs, *Neither Sun nor Death*, trans. by Steve Corcoran (Los Angeles: The MIT Press, 2010), p. 143.

752 Peter Sloterdijk, *Sphären III Schäume*, Vol. 3, (Frankfurt am Main: Suhrkamp, 2004), pp. 154 –92.

753 Peter Sloterdijk, *Spheres Volume I: Bubbles, Microspherology*, trans. by Wieland Hoban (California: Semiotext(e), 2011).

754 Luce Irigaray, *L'Oubli de l'Air chez Martin Heidegger* (Paris: Les Éditions de Minuit, 1983), p. 147.

755 Sloterdijk, *Sphären 3 Schäume*, p. 177.

756 Author's translation.

757 Luce Irigaray, *Marine Lover of Friedrich Nietzsche,* trans. by Gillian C. Gill (New York: Columbia University Press, 1993) and Luce Irigaray, *The Forgetting of Air: In Martin Heidegger,* trans. by Mary Beth Mader (London: The Athlone Press, 1999).

western metaphysics, finds that in his turn Heidegger's ontology, based upon grounding, has forgotten the air. His groundings take earth as the element that is the substrate for human being, language and dwelling. But he is oblivious to air. Irigaray asks: 'Can man live elsewhere than in air?'[758]

On the rare occasion that Wilson lost his temper, it was provoked by the forgetting of air: these were incidents in which the issue of ventilation had been overlooked by his colleagues who, Wilson said, complained of 'fresh air fadists'.[759] In 1891 the Public Health Act introduced legislation to mitigate the pollution that created soupy fogs in the cities and exacerbated the lung diseases of its inhabitants.[760] Wilson worked as a doctor in London and must have been subject to this unhealthy air. Ill from overwork, he wrote 'all I want is a decent atmosphere for a bit'.[761] Wilson would have been particularly sensitive to air quality and breathing, as he had very nearly not been healthy enough to qualify for the expedition, having suffered from pulmonary tuberculosis, first diagnosed in 1898.[762] Wilson's experience of this disease was in fact implicated in the development of his practice as an artist. It was during his years of convalescence that Wilson perfected his technique of colour memorisation and notation for making watercolour paintings from pencil sketches.[763] Tuberculosis was also the downfall of the unfortunate Eskimos that Peary brought back to Boas in the New York Museum (see Chapter 4, *Lantern Landscape* 2013), and had been one of the diseases that Boas describes as responsible for the decimation of so many colonised populations.[764]

During the expeditions, Wilson had been responsible for ventilation.[765] This came under his duties as the expedition doctor. In his Wellcome Medical Diary there is an entry under 'Air-Space and Ventilation':

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758 Irigaray, *The Forgetting of Air: In Martin Heidegger,* p. 8.

759 Wilson, *Diary of the 'Discovery' Expedition*, pp. 151–52, 164, 169.

760 W.A. Holdsworth, *The Public Health (London) Act, 1891: With an Introduction, Notes and Index* (London: George Routledge and Sons, 1891).

761 Seaver, *Edward Wilson of the Antarctic*, p. 29.

762 Williams, *With Scott in the Antarctic*, p. 68.

763 See 'The Tuberculous Year: 1888–1901' in *Edward Wilson* <http://www.edwardawilson.com/component/content/article/7-life/17-the-tuberculous-years-1898-1901> para 5/9. [14 March 2014]

764 Boas, *The Mind of Primitive Man*, pp. 12–13. See Chapter 4: 'Pharmakon'.

765 Wilson, *Diary of the 'Discovery' Expedition*, p. 169

> Every healthy person should have at least 800 cubic feet of air-space, and every sick person at least 1000 feet. With this space provision should also be made efficient ventilation, for if the air is to be kept sweet, 3000 cubic feet per hour per head must be supplied.[766]

During the second expedition, the atmosphere of the hut was often prone to damp. Wilson was fond of opening the windows to let in fresh air, to the dismay of some of his companions. On the first expedition during which time the men occupied the *Discovery*, he came into dispute with Koettlitz over the opening and closing of the skylights in the ship's wardroom.[767] Wilson wrote:

> Little ailments are on the increase in the ship, chiefly due to ennui, and want of exercise and air and light. The continual artificial light indoors and the still more trying light out of doors is telling on my eyes a good deal. The beastly way in which our patent stoves smoke is also very trying, whenever there is any south in the wind, and that tells on one's eyes too. Cigar smoke too, with ten, no nine men smoking in the ward room the whole evening, that also tells on one's well being. One turns in every night in a filthy smoking room atmosphere, and I cannot bless the beastly ass that gave officers' mess enough cigars to last the winter.[768]

Wilson, a reformed smoker, had given up the habit in 1900.[769] Remember now, that a smoker's breath was crucial to the experimental proof of atom spin[770] and therefore these self-enveloping atmospheres of our breath are implicated in our observations: the interference of our very breath that provides the sulphide for a silver ion to become visible or that coats the paper with ice so that no mark can appear.[771] Braidotti writes that 'not unlike breathing, smoking merges the smoker with his or her environment. Thus, smoke is a protective membrane that the subject self-projects so as to affect and in some way create his or her habitat'.[772]

Human habitation across the globe has dealt with the specific demands of particular environments for air conditioning: either by creating shelter from

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766 'The Sledging Diary and Memoranda' [on microfilm] (frame 165/p. 317).

767 Wilson, *Diary of the 'Discovery'*, p. 167.

768 Wilson, *Diary of the 'Discovery'*, p. 162.

769 Seaver, *Edward Wilson of the Antarctic*, p. 30.

770 See my discussion of this in this thesis in the section titled 'The Inseparability of Observer and Observed' in Chapter Three. Barad recounts 'the boundaries of an apparatus, or "ceci n'est pas une cigar", Barad, *Meeting the Universe Halfway,* pp. 166–68.

771 I refer to the moisture in breath freezing on paper as Wilson tried to draw in the open air.

772 Braidotti, *Transpositions*, p. 222.

weather, insulation from cold, or protection from heat, or by the hermetic provision of the atmospheres required for breathing where none are otherwise available, such as deep under the sea or out in the void of space (Fig 4.21). Air is the medium that is manipulated in air conditioning. If the human moves too far outside of the temperate zones then air conditioning must be undertaken in some form. These very cold or very hot places that require air conditioning may be thought of by many of us as elsewhere to our normal lives, yet increasingly the need for air conditioning is coming closer to home: there are current concerns about the carbon dioxide levels required to conserve humanly habitable atmospheres. The preservation of liveable atmospheres depends upon cutting CO2 emissions.[773]

In response to this kind of information, James Lovelock, best known for his Gaia theory, in a recent interview suggested that:

> instead of talking about saving the planet, air conditioning the planet, you air condition the city to the temperature you want, its quite easy compared with the planet.[774]

The interviewer asked: 'Do you think we should give up trying to save the planet?' to which Lovelock replied, 'Exactly'.[775] Lovelock suggests a change of attitude about the scale of management of our atmosphere. Braidotti suggests that the smoker is motivated to smoke by a desire to create a 'protective membrane' around themselves, and that this 'is definitely a way of relating' to the world, albeit a rather negative and toxic one, and 'in some way a self-contradictory mode of both connecting to and separating from one's habitat'. She notes smoking as a negative and toxic 'way of relating to one's environment'.[776] She asks 'how many inhabitants of the post-industrialized urbanized world […] would even recognize fresh air if they ever came across it'.[777]

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773 Arthur Nelson, 'CO2 Emissions Must be Zero by 2070 to Prevent Climate Disaster, UN says', *The Guardian*, 19 November 2014 <www.the guardian.com/environment/2014/nov/19/co2-emissions-zero-by-2070-prevent-climate-disaster-un> [3 August 2015].

774 James Lovelock, interview by Iain Sample and Elliot Smith, *The Guardian*, Thursday 10 April 2014, < www.theguardian.com/environment/video/2014/apr/10/james-lovelock-climate-change-saving-plant-video> [accessed 19 July 2015]; hereafter James Lovelock, interview.

775 James Lovelock, interview.

776 Braidotti, *Transpositions*. p. 222.

777 Braidotti, *Transpositions*, p. 223.

In the Nervi design for the Pitt-Rivers Museum, the domed climatron housed tropical nature in an enclosed atmosphere as the background to ethnographic collections, and this glasshouse was placed at the centre of the circles of latitude and radiating arms of longitude (Fig 4.17). I suggest that we can compare this to a Boasian diorama, but one that excludes the people and instead contains only the spectacle of the environment as a back-drop to the museological display of artefacts of human making. Significantly, Antarctica does not feature in the museum of anthropology because museums of ethnography address geographical areas through their inhabitation by human culture. Antarctica, a place without indigenous human inhabitants, and with no human history, does not have any artefacts of human culture to contribute to the museum of ethnography; it is an empty set. But I suggest that it is precisely through Antarctica's absence from the museum of ethnography that its pertinence for human history can be traced.

As Stephen Pyne points out, extreme environments such as Antarctica's are some of those that require air conditioning:

> Ice, abyss, and space have some features in common with, and some in which they differ from, the settings of traditional history. They are all places in which humans cannot live without extensive life-support systems.[778]

Yet, as with the forgetting of air that Irigaray traces in the philosophy of Heidegger, Antarctica must be remembered. The question that Antarctica poses to the centre is that of a post-human subjectivity and new ethical ecological agency. In this chapter, 'The Colour of Water', Franz Boas's writing on anthropology and his deconstruction of the concept of race has been refracted through the Wilson archive of watercolour painting to interpret the disavowal of atmosphere. I have argued that thinking through *plein air* watercolour painting can lead us back to remembering the open air. Irigaray points out that the air, so evident and overlooked, is the medium of our lives, but remains un-thought.[779] Boas's efforts to take account of the subjective interpretation of the colour of water led him to a displacement of race as a typological category and to comprehend the relativism of human cultures.

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778 Stephen Pyne, 'Extreme Environments', *Environmental History*, **15,** 3 (2010), pp. 509–13, p. 510.

779 Irigaray, *The Forgetting of Air: In Martin Heidegger*, p.?

Whereas Pitt-Rivers awaited discovery of the ur-human to fill the proposed central place in his typological arrangement, Boas's critique displaces this central point of historical origin elsewhere. He does this by reorienting the axis from one organised by time to one arranged by place. In a post-human scenario there is also a de-centring of the Cartesian subject: the human is displaced from the centre of things. At the core of both the design for the Nervi dome and in the post-human world is the climate, the ventilation duct, the air conditioning system, the even more central and forgotten core of the very air we breathe.

Chapter One Chapter Five
Elsewhere Where Else

Fig 5.1

Next Fig 5.2

No More Elsewhere **No Where Else**

This fifth chapter, 'Where Else', forms a chiastic pair with and is refracted through the first chapter, 'Elsewhere', to produce interpretations of gender and race that lie latent within the manifest content of the Wilson archive. In 'Histories of a Feminist Future', Elizabeth Grosz also uses the term latency, but to describes the past's relation to the present:

> The past, in other words, is always already contained in the present, not as its cause or its pattern but rather as its latency, its virtuality, its potential for being otherwise.[780]

Grosz speaks for the openness of both past and future.

> Rather than the past being regarded as fixed, inert, given, unalterable, it must be regarded as inherently open to future rewritings, as never 'full enough', to retain itself as a full presence that propels itself intact into the future.[781]

She points out that 'it is only the interests of the present that serve to vivify or reinvigorate the past'.[782] With regard to Grosz, her vested interest in reviving the past is a feminist one.

> The project of the feminist historian must be, in part at least, the forging of relations between the sexes, and among the members of each sex, along lines that dramatically diverge from the present. The past, a past no longer understood as inert or given, may help engender a productive future, a future beyond patriarchy.[783]

Following Grosz, the type of history that I aim to perform in this thesis could be identified as history for the sake of the future rather than history for the sake of the past. These two types of history are also contrasted by Stocking in 'On the Limits of "Presentism" and "Historicism"'.[784] Stocking writes on Whiggish progressive presentism in historical interpretations that:

> Because it wrenches the individual historical phenomena from the complex network of its contemporary context in order to see it in abstracted relationship to analogues in the present, it is prone to anachronistic misinterpretation.[785]

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780 Elizabeth Grosz, 'Histories of a Feminist Future', *Signs,* **25,** 4 (2000), pp. 1017–1021, p.1020. <http://www.jstor.org/stable/3175479> [27 February 2015].

781 Grosz, 'Histories of a Feminist Future', p. 1019.

782 Grosz, 'Histories of a Feminist Future', p. 1019.

783 Grosz, 'Histories of a Feminist Future', p. 1018.

784 Stocking, *Race, Culture, and Evolution: Essays in the History of Anthropology*, p. 6.

785 Stocking, *Race, Culture, and Evolution: Essays in the History of Anthropology*, p. 4.

In this chapter 'Where Else' is also 'when else', in that it is a manoeuvre that thinks of space in terms of time. From a feminist perspective we must engage with 'where else?' as a question which locates a multiplicity of viewpoints and positions of others, so as to establish an ethics of mutual responsibility. From an anthropocentric and post-human perspective this is an ethics comprehended in terms of the world's limits: there is only one world: we must recognise therefore that there is no 'where else' and thus, given the spatial limits, we have to think temporally. In this sense, 'no where else' as the title of this section of this chapter, and rephrased in the title of the thesis as *No More Elsewhere*, acknowledges the world's limits in its environmental resources and the need to take responsibility both for others and for one's own actions in a world that is finite and on the brink of irreversible damage to our climate. Asking 'where else?' is not a project, then, that recommends further colonisation of extreme environments such as the deep ocean or other planets, but rather suggests a project of thinking 'as if'.

Claire Colebrook expresses a comparable sense of 'no more elsewhere' with regards to the Anthropocene, and considers history in a similar vein to Grosz. What Grosz terms as 'latent', Colebrook calls 'not actualised':

> There is no other planet, and there is no other history; there is – now - no other possible humanity, and yet the potentiality of the history that is not actualized might open another world in the present.[786]

The feminist interpretation that I apply here seeks not only to interpret the latent feminine within the archive, but also to produce a feminist critique that is productive and generative of different futures. As Grosz goes on to say, futurologists have been limited by their tendency to 'extrapolate from existing knowledges and practices into a future that still resembles the present'. Grosz defines her aim as 'clearing a conceptual space such that an indeterminate future is open to women'.[787]

In this instance, the archive provides a place from which to look backwards into the past in order to look forwards into the future. But this futurology is different from that offered by Wilson's biographer, who notes that Wilson's

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786 Colebrook, 'Scale and Refuge: Twilight of the Anthropocene', p. 4. See also Claire Colebrook, *Death of the PostHuman: Essays on Extinction,* Vol. 1 (Michigan: Open Humanities Press, 2014).

787 Grosz, 'Histories of a Feminist Future', p. 1017.

'earliest scrap-book rather prophetically contains the picture of some explorers in the Arctic regions'.[788] The futurology proposed here is not an invitation to repeat the heroic deeds of the past in the same mould. In some of the following passages, while considering the science fiction and scientific predictions of Wilson's time, I will simultaneously attempt my own futurology. The subjects, artefacts and episodes under consideration are different material instances of archival encounter. The chiastic *ekphrasis* I perform applies an interpretative *Entstellung* in order to reveal what might be latent within the manifest content of the archive. Chiastic *ekphrasis* as I have established it as a method here, aims to enact the decentring deferral of generative difference as found in sexual difference, employing *ekphrasis,* understood as a practice in which boundaries are traversed in the shift, for example, between painting and writing, as when refraction occurs.

All data require media – vehicles, or bodies – to carry them. This is nowhere more apparent than in the data of genetic material in its reproduction from one generation to the next. Enter the penguin, a species other to the human. In the body of the penguin I read the sexualised, racialised and naturalised 'constitutive others' that Braidotti describes as excluded by the 'the emancipatory project of modernity'.[789] Braidotti argues that these sexualised and racialised others, and the natural environment, have nonetheless 'been instrumental to the institution of masculine self-assertion'.[790] These 'others' mark the boundary limit of the emancipated subject and play a part in defining the norm. In this chapter, refractions occur in the crossing of boundaries between the emancipated subject and its constitutive others. If I try to think of this in light of Braidotti's philosophy of nomadism, I would want to point to that instance when Braidotti writes that these 'others':

> also mark the crisis of the former 'center' or dominant subject position. In the language of philosophical nomadology, they express both the crisis of the majority and the patterns of becoming of the minorities.[791]

For Braidotti, 'becoming woman is the marker for nomadic, rhizomatic

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788 George Seaver, *Edward Wilson of the Antarctic,* p. 3.

789 Braidotti, *Nomadic Theory: The Portable Rosi Braidotti*, p. 28.

790 Braidotti, *Nomadic Theory: The Portable Rosi Braidotti,* p. 28.

791 Braidotti, *Nomadic Theory: The Portable Rosi Braidotti*, p. 29.

consciousness'.[792] Braidotti's transposition of differences can work towards becoming woman, but it must be noted that, 'The reference to "woman" in the process of "becoming woman" however, does not refer to empirical females, but rather to topological positions, degrees, and levels of intensity, affective states'.[793]

Wilson was very fond of penguins and made many drawings of the bird and its eggs (Fig 5.1). He was also often caricatured as a penguin (Fig 5.2). In terms of Braidotti's nomadology, and as far as Wilson represents the majority view of the white, male, European, heroic explorer, the crisis in this dominant subject position might here be expressed as Wilson's 'becoming penguin'. In the following passage, using 'becoming' to indicate a future-oriented movement that is explored through both the penguin and the egg, I aim to turn 'no more elsewhere' into the more affirmative question of 'where else?'

792 Braidotti, *Nomadic Theory: The Portable Rosi Braidotti,* p. 37.

793 Braidotti, *Nomadic Theory*: *The Portable Rosi Braidotti,* pp. 36–37.

OUR·BILL

Medium **Refractive Index**

Many of my first encounters with the archive have been digital and conducted through the portal of the computer screen. In a lecture titled 'From Sea of Ice to Liquid Crystals: Trajectories of Anomalous States of Matter', Esther Leslie described the ubiquity of the liquid crystal display screen as the material support and interface for our digital images.[794] In liquid crystal displays the polarised light is refracted twice as it passes through liquid crystal: the double refraction occurs because liquid crystal has two indices of refraction. Leslie makes reference to the nineteenth-century discourses of scientific research that struggled to classify this fourth state of matter, next to the more familiar categories of solid, liquid, gas.[795] It is this anomalous material that supports our digital displays.

Leslie compares the digital aesthetic that militates against the natural process of decay to the stories of frozen bodies caught in a cryogenic perpetuity in which decay does not take place.[796] This recalls the preserved corpses of Scott, Wilson and Bowers as discovered by the search party eight months after their deaths. Apsley Cherry-Garrard reported that Wilson appeared serene, but that Scott was contorted in mid-gesture with his arm protectively cast across Wilson's chest.[797] The frozen bodies of these men provides a gruesome example through which to consider some of Leslie's points concerning the frozen digital aesthetic, and to apply her thinking to the way in which the history of Antarctic exploration has been preserved.

The homepage of *Freeze Frame*, the Scott Polar Research Institute's online 'Historic Polar Images, 1845–1982' digital resource, explains that the project aims as: conserving, digitising and exploring, with an eye to future generations,

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794 Esther Leslie, 'From Sea of Ice to Liquid Crystals: Trajectories of Anomalous States of Matter', lecture presented as part of 'Curious Matters: A Forum for Experimental Cultures', History of Art Department, UCL, London. 12 March 2014.

795 Liquid crystals were discovered in 1888 by Austrian botanist Friedrich Reinitzer and German physicist Otto Lehman. See *Crystals that Flow: Classic Papers from the History of Liquid Crystals*, ed. and trans. by Sluckin, Dunmur, & Stegemeyer (London: Taylor & Francis, 2004).

796 Leslie, 'From Sea of Ice to Liquid Crystals', lecture, 12 March 2014.

797 Cherry-Garrard, *The Worst Journey in the World*, pp. 495–97.

current accessibility and facilitating discovery.[798] *Freeze Frame* digitisations make historic images available as screen versions of what Leslie describes as liquid crystal's shifting 'freeze and flow'.[799]

> Once scanned the images will be manipulated using Adobe Photoshop to remove signs of wear and tear, creating a digital copy of the image.[800]

These digital versions have in turn have been derived from Ponting's silver-gelatin glass plate negatives, part of a photographic process, used from the 1880s to 1920s, the photographic traces of which were carried in the by-products of the bodies of animals: gelatin obtained from animal protein is used as the base in which to suspend silver salts. Silver bromide grains then react with light to create the silver deposit. The remaining plates that Ponting left in the Hut have been subjected to conservation.[801] The leaflet produced by the Scott Polar Research Institute to introduce *Freeze Frame* identifies these photographic negatives as 'in most urgent need of protection as the facilities for reproduction are disappearing'.[802]

The glass negatives in the Scott Polar Research Institute archive are fragile and not available for researchers to view. They are vulnerable to humidity and temperature changes. Mirroring is the name given to a process of degradation in which the dark areas of the negative appear to acquire a metallic sheen due to reactions with the atmosphere or the materials with which the negatives have been kept in contact. Thus these hundred-year-old black and white images of elsewhere are less and less a window through to another time and more and more a mirrored surface upon which we find our own reflection.

My first viewing of the image of Wilson working at the desk in the Cape Evans hut (Fig 2. 16) was accessed through *Freeze Frame*. It is worth noting that in this image Wilson is working on a watercolour of a paraselene or

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798 Scott Polar Research Institute, 'Freeze Frame: historic polar images', web resource, Scott Polar Research Institute, University of Cambridge < www.freezeframe.ac.uk/home/home > paras 4, para. 3/4 [20 July 2014].

799 Leslie, 'From Sea of Ice to Liquid Crystals', lecture, 12 March 2014.

800 'Freeze Frame: historic polar images', A5 leaflet, Scott Polar Research Institute, University of Cambridge, paras 19, para. 7/19.

801 'Antarctic conservation', blog archive, Ponting's plates. Thursday 22 July 2010. Natural History Museum' <http://www.nhm.ac.uk/nature-online/earth/antarctica/antarctic-conservation/blog-archive/?p=416> [10 February 2014].

802 'Freeze Frame: historic polar images', A5 leaflet, para. 5/19.

moondog (Fig 2.17), a comparatively rare atmospheric phenomenon caused by the refraction of moonlight through ice crystals in the cirrus cloud. Refraction plays a part in the phenomenon of the paraselene, as it does with the liquid crystal that produces images on our screens.

I was curious to return to the site in which both photograph and painting were made.

With the aid of the liquid crystal of my computer display and Google maps I found my way to the doorway of the Cape Evans Hut. I approached the cubicle pictured in the Ponting portraits where Wilson spent so many hours drawing and painting. I saw the desk in an over-exposed glare. I recognised the lampshade, now resting on the table, the base missing. There were some pencils, a plate, a pile of papers neatly arranged. But most striking, belly-up on the desk, dead for over a century, was the mummified and frozen corpse of a penguin (Fig 5.3). According to the theory proposed at the time, Wilson believed that the reproductive secrets held within the body of a penguin, such as this frozen specimen, would reveal insights into the history of evolution.[803] This penguin corpse, encountered on screen in petrified unrest, can be compared to a frozen archive. My task in the sections that follow, following Grosz, is to re-invigorate this corpse and other examples of archival material by interpreting them as 'histories of a feminist future'.[804]

803 This is explored in detail in the following section: 'Some Notes on Penguins'.

804 Grosz, 'Histories of a Feminist Future'.

Fig 5.3

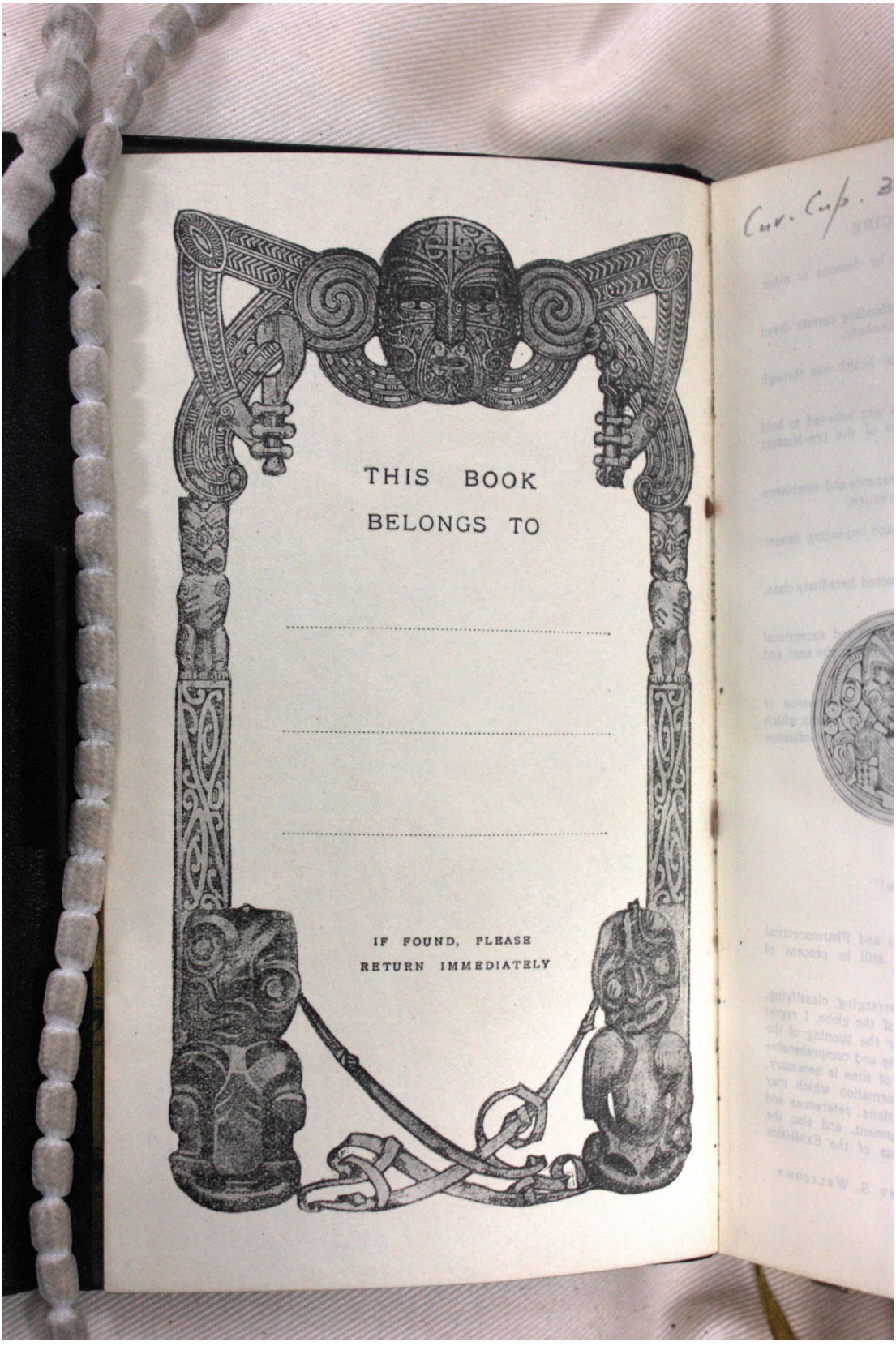

Fig 5.4

Immediacy If Found, Please Return Immediately

Wilson's sledging journal to the South Pole is now held in the British Library with a Z category restriction due to its fragility: it requires special written justification before any request for viewing can be satisfied.[805] As with the photographic negatives transferred to digital format for *Freeze Frame* at the Scott Polar Research Institute, this artefact in the British Library has been copied into another medium. I can access it as a black and white copy scrolling through the pages of the microfilm that is itself another endangered medium near extinction. The printed script reads: 'THIS BOOK BELONGS TO…' to which Wilson has added his name 'E.A. Wilson' and 'Sledge Journey to the South Pole 1911-12'. Just below this the British Museum has stamped its royal seal of accession. The printed text continues, 'IF FOUND, PLEASE RETURN IMMEDIATELY' (Fig 5.4).

This diary is written into the pages of Wilson's *Wellcome's Medical Diary and Visiting List 1910*.[806] Wilson's journal begins on the pages of the Obstetric Engagements.[807] To modify the calendar Wilson had written big crosses through the months and retitled them 'Southern Sledge Journey'. The 'MAY 1911' slot had been replaced with 'JAN 1912', and 'JUNE 1911' had become 'FEB 1912', and each numbered date had been scribbled over in a thick circle in pencil. Wilson wrote his narrative across the Obstetric Table that shows the calculations made for the duration of pregnancy, from the 'first day of last menstrual period' to the 'due date'. The column headings read – 'No./ Name and address/When engaged/When expected/When attended/Sex/ No of Labour/Age/Fee/When paid/Remarks (e.g. Name of Nurse). Utero gestation on page 336'.[808] Wilson's narrative of male heroism is written over the table accounting for and categorising the reproductive bodies of women. The maternal-feminine, the female body as the place of origin, is so often forgotten in epic stories involving self-invention and masculine self-assertion. Read as a

805 'The Sledging Diary and Memoranda' [on microfilm]

806 *Wellcome's Medical Diary and Visiting List,* (1910).

807 Wilson, 'The Sledging Diary and Memoranda' [on microfilm] (Frame 178/ no page number)

808 'The Sledging Diary and Memoranda' [on microfilm] (Frame 336/p. 175)

palimpsest, Wilson's Sledging Diary is underwritten by the maternal-feminine body, a forgotten ground upon which such a masculine subject would have been raised.[809]

The philosopher Luce Irigaray has made it her project to excavate the cannon of western philosophy to uncover this repression of the maternal-feminine, this forgotten ground. Significantly for my investigation here, Irigaray also critiques the idea of 'ground' as fundamental and proposes terms such as milieu or atmosphere as primordial, and she understands that the hierarchy between these terms is part of the binary hierarchy between the masculine and the maternal-feminine.[810] Irigaray's *An Ethics of Sexual Difference* examines the suppression of sexual difference in Western culture and argues for embodied and particular experience of a sexed subject.[811] Irigaray compares and contrasts the sexed biological attributes of the male and female bodies and tracks the way that these bodily experiences result in subjectivities that have quite different relations to space and place and time.[812] According to Irigaray, Woman is placed as Man's negative in Western binary oppositions. These couplings include the pairs: man-woman, original-imitation, and same-other.

Irigaray undertakes one of these excavations of the maternal-feminine upon the work of the philosopher Maurice Merleau-Ponty. In 'The Invisible of the Flesh: A Reading of Merleau-Ponty, *The Visible and the Invisible*, 'The Intertwining – The Chiasm', Irigaray, using a method of copying and mimesis, makes a critique of what she sees as Merleau-Ponty's enacting of repetition of sameness in reversibility.[813] In 'The Intertwining – The Chiasm', which was part of the manuscript titled 'The Visible and Invisible' unfinished at his death in 1959, Merleau-Ponty explores a notion of the body as 'flesh' that comes about through a crossing over between objective existence and subjective

809 It is a curious historical fact that in 1978 Argentina embarked upon an attempt to make a native territorial claim on Antarctica by airlifting a pregnant woman to the Antarctic Peninsula, where she completed her pregnancy and gave birth to a baby boy. Emilio Marcos Palma was born to the wife of a captain of the Argentine army. <http://webecoist.momtastic.com/2011/02/15/born-freezing-meet-antarcticas-first-citizen/. > [13 November 2012].

810 Irigaray, *The Forgetting of Air: In Martin Heidegger.*

811 Luce Irigaray, *An Ethics of Sexual Difference*, trans. by Carolyn Burke and Gillian C. Gill, (London: The Athlone Press, 1993).

812 Irigaray, *An Ethics of Sexual Difference,* pp. 5–19.

813 Irigaray, *An Ethics of Sexual Difference*, pp. 151–84.

experience.[814] It is useful to note that the French word used by Merleau-Ponty is 'chiasme' which is commonly translated into English as 'chiasm'. Fred Evans and Leonard Lawlor pay attention to this by pointing out that Merleau-Ponty originally chose to use the French 'chiasme' which is associated with the rhetorical form of chiasmus, but that:

> The convention among English commentators has been to assume, evidently, that Merleau-Ponty intended the anatomical rather than the rhetorical meaning (his 'chiasme'), and therefore use the English 'chiasm' rather than the English 'chiasmus'.[815]

This choice of translation perhaps then underplays the rhetorical aspect of Merleau-Ponty's philosophy.

In Merleau-Ponty's phenomenology, sight is closely associated with touch. The metaphor of the hands touching and being touched is the one that he uses to describe the reciprocity of vision, what he calls the chiastic intertwining of seer and seen.[816] Merleau-Ponty argues for an experience of flesh as twofold, as object and subject, and notes that the world is made of the same flesh out of which we ourselves are fashioned.[817] Irigaray opens her critique by addressing Merleau-Ponty's use of language, suggesting that his use of metaphors could be taken as an allusion to 'intrauterine life',[818] 'an archaic fleshly atmosphere, a sojourn that is difficult not to compare once again to the intrauterine'.[819] Irigaray identifies that, despite his avowed intention to dispose of a hierarchy in favour of reciprocity and reversibility, in Merleau-Ponty's analysis he 'returns the privilege to the *seer's* look' rather than privileging the visible or even giving it equal status.[820] It is then this 'visible' that Irigaray goes on to interpret in relation to the mother's body as envelope, the very enveloping function that Irigaray has identified Merleau-Ponty's seer as trying to usurp.[821]

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814 Maurice Merleau-Ponty, 'The Intertwining – The Chiasm', in *Maurice Merleau-Ponty: Basic Writings*, ed. by Thomas Baldwin (London; New York: Routledge, 2004), pp. 247–71.

815 Evans, Fred and Leonard Lawlor, eds. *Chiasm: Merleau-Ponty's Notion of Flesh* (New York: SUNY Press, 2012), p. 17, n. 2.

816 Merleau-Ponty, 'The Intertwining - The Chiasm', pp. 247–71.

817 Merleau-Ponty, 'The Intertwining - The Chiasm', p. 263.

818 Irigaray, *An Ethics of Sexual Difference*, p. 152.

819 Irigaray, *An Ethics of Sexual Difference*, p. 159.

820 Irigaray, *An Ethics of Sexual Difference*, p. 153.

821 Irigaray, *An Ethics of Sexual Difference*, pp. 154–55.

In the 'The Intertwining – The Chiasm', Merleau-Ponty then extends his discussion of colour as the source for examples through which to introduce his readers to his idea of the 'chiasm'. Colour he describes as 'less a thing' than a 'difference between things' that occupies 'straits between exterior horizons and interior horizons ever gaping open'.[822] Merleau-Ponty makes a special argument for colour's role in the intermingling of space and things:

> Thus we must see space and its content *as* together. The problem is generalized; it is no longer that of distance, of line, of form; it is also, and equally, the problem of colour.[823]

He points out that colour is not, however, the 'master key'[824] but it does bring us closer to appreciating this intertwining of the 'chiasm'. According to Merleau-Ponty's philosophy, there is something concerning the unfixed nature of colour, the difficulty of attributing it or identifying its locations, its mutability under changing conditions, that makes it a prime topic for the consideration of the blurring of object into its location and vice versa, for the intermingling of the seer and the seen, for the inseparability of observer and observed.[825] He says that 'a painting mixes up all our categories'.[826] Merleau-Ponty writes that 'by a sort of reversal, every colour we perceive in nature elicits the appearance of its complement'.[827]

Irigaray takes her commentary on Merleau-Ponty forward with regard to his thoughts on colour:

> At this point, the talisman of color appears, with its 'atmospheric' properties, which are irreducible to the form that seeing defines. Color? The symptom and the after effect of our incarnation, our genetic fate, our identity prior to any proper form perceivable from outside[…]That by which I (male or female) am moreover affronted as if by genealogical heritage that I cannot change: I can change neither the colour of my eyes nor my vision of things or the atmosphere that results from this color.[…] Color resuscitates in me all that prior life, the preconceptual, preobjective, presubjective, this ground of the visible where seeing and seen are not yet distinguished, where they reflect

822 Merleau-Ponty, 'The Intertwining – The Chiasm', p. 250.

823 Maurice Merleau-Ponty, 'Eye and Mind', in *Maurice Merleau-Ponty: Basic Writings,* pp. 290–324, p.311

824 Merleau-Ponty, 'Eye and Mind', *Maurice Merleau-Ponty: Basic Writings,* p. 312.

825 Merleau-Ponty, 'Eye and Mind', *Maurice Merleau-Ponty: Basic Writings,* p. 309.

826 Merleau-Ponty, 'Eye and Mind', *Maurice Merleau-Ponty: Basic Writings,* p. 301.

827 Merleau-Ponty, 'Cézanne's Doubt', in *Maurice Merleau-Ponty: Basic Writing,* pp. 272–89, p. 275.

> each other without any position having been established between them.[828]

Irigaray critiques Merleau-Ponty's understanding of the 'chiasm' as 'A closed system'[829] in which 'Nothing new can be said… Everything is unceasingly reversible'.[830] 'Merleau-Ponty's whole analysis', Irigaray writes:

> is marked by this labyrinthine solipsism. Without the other, and above all the other of sexual difference, isn't it impossible to find a way out of this description of the visible, doubled with that of the tactile of the touching hands?[831]

What Irigaray calls for instead is an openness to difference, a difference that is never fully reversible without a remainder.[832] Irigaray's thinking on sexual difference maintains that relations between men and women will be based on an irreducible difference that allows for a rapport but not an identification, and thus an annulment of difference into sameness.[833] Irigaray refers to a figure of the chiasmus too, but to offer a model for relations between the sexes that allows for difference. Irigaray's chiasmus is not a closed circle of reflection of the same but a process of self-differing (Fig 5.5).

Irigaray applies a similar critique to the work of Freud in her essay 'The Blind Spot of an Old Dream of Symmetry', in which she writes a re-interpretation of Freud that excavates the repressed feminine.[834] Under the subtitle 'The Dream Interpreters Themselves', Irigaray writes, 'that old dream of "the same" has defied the most prescient diviners' because their method -

> did not question the credits that the method itself had already invested in that dream. The interpreters of dreams themselves had no desire but to rediscover the same. Everywhere. And, indeed, it was not hard to find. But was not *interpretation* itself, by that fact, caught up in the dream of identity, equivalence, analogy, of homology, symmetry, comparison, imitation, was it also not more or less *adequate*, that is to say more or less *good*?[835]

In other words, according to Irigaray, the dream interpreters, as a result of the restrictions of their methods, are caught up in the imperative of repeating in

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828 Irigaray, *An Ethics of Sexual Difference*, pp. 155–56.

829 Irigaray, *An Ethics of Sexual Difference*, p. 172.

830 Irigaray, *An Ethics of Sexual Difference*, p. 180.

831 Irigaray, *An Ethics of Sexual Difference*, p. 157.

832 Irigaray, *An Ethics of Sexual Difference*, pp.160, 162.

833 Irigaray, *An Ethics of Sexual Difference*, pp. 167, 174–75, 182–84.

834 Luce Irigaray, 'The Blind Spot of an Old Dream of Symmetry', in *Speculum of the Other Woman*, trans. by Gillian C. Gill (Ithaca, New York: Cornell University Press, 1985), pp. 13–129.

835 Irigaray, *Speculum of the Other Woman*, p. 27.

their findings what they already expected to be there, rather than being open to anomalies and difference. According to Irigaray, this kind of subject is caught up in his own language:

> In his speech acts but also in his linguistic relation with the other, the subject closes his circle, his bubble.[…] There is no becoming, except that which is already closed off. No air, except that which would exhale words already spoken, already brought into existence?[836]

What Irigaray calls for is a chiastic return,[837] so that instead of the two sexes being divided between the 'positive and the negative poles'[838] without possibility for either approach or return, they can make 'a chiasmus or double loop in which each can go toward the other and come back to itself'.[839] It is as if these dream interpreters in Irigaray's critique were responding to the printed words on the first pages of Wilson's sledging diary: 'If found, please return immediately'. But an immediate return bypasses the medium and is caught therefore in the old myth of symmetry and reflection. As Irigaray points out, even 'this doubled and crisscrossed situating of which Merleau-Ponty speaks neglects the sensible *medium*'.[840]

836 Irigaray, *An Ethics of Sexual Difference*, pp. 177–78.

837 Irigaray, *An Ethics of Sexual Difference*, p. 9.

838 Irigaray, *An Ethics of Sexual Difference*, p. 9.

839 Irigaray, *An Ethics of Sexual Difference*, p. 9.

840 Irigaray, *An Ethics of Sexual Difference*, p. 162.

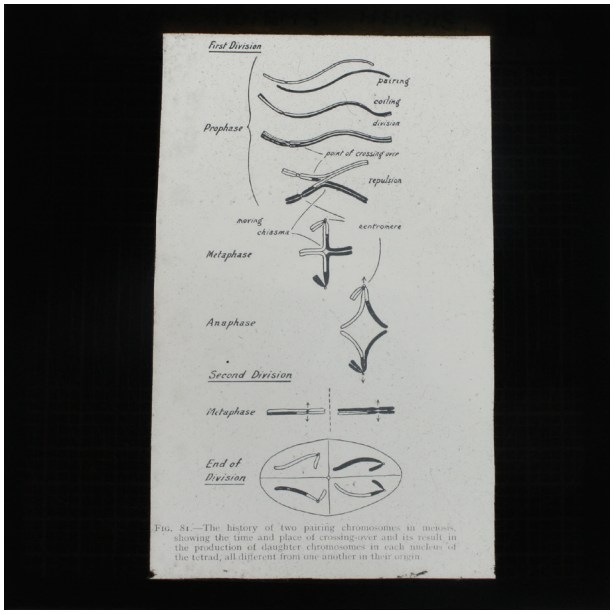

FIG. 81.—The history of two pairing chromosomes in meiosis, showing the time and place of crossing-over and its result in the production of daughter chromosomes in each nucleus of the tetrad, all different from one another in their origin.

Fig 5.5

Analogy **Similarity-in-difference**

> The ruling principle of resemblance, identity, analogy and opposition has to be avoided in thinking about the virtual and intensive becoming.[841]

Braidotti and Boas both point to analogy as a method to be avoided: the first for the sake of thinking about becoming, the second with regard to late-nineteenth-century debates in ethnology. Boas argued that: 'We have to study each ethnological specimen in its history and in its medium'.[842] I suggest that we can relate Boas's thinking on analogy in ethnology to thinking about becoming. Boas only approved of analogy as a productive method in so far as it was a means of proposing questions. He was sceptical of analogy's capacity to provide an end answer.[843] The 'argument[s] from analogy', Boas asserted 'are the foundation of most errors of the human mind'.[844]

However, the so-called comparative method favoured by Pitt-Rivers[845] and the high-profile American Otis T. Mason, curator of the department of Anthropology at the National Museum of Natural History Smithsonian Institution,[846] relied upon analogy. In an article that Mason wrote on the typology of throwing-sticks, he quotes both Col. Lane Fox's (Pitt-Rivers) typology of throwing-sticks,[847] and Boas's corroboration of a Baffin Land throwing-stick as typical of the region,[848] thereby bringing together the typological thinking of Pitt-Rivers and the non-typological Boas into the service of his own typological description. This typological thinking was at the root of an exchange of letters that Boas had with Mason and John Wesley Powell in the journal *SCIENCE* in 1887 in which he discussed analogical

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841 Rosi Braidotti, *The Posthuman*, p. 171.

842 Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart', p. 485.

843 Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart', p. 485.

844 Franz Boas, 'Museums of Ethnology and Their Classification,' *SCIENCE,* **9**, No. 228, (June 17 1887), pp. 587–89. <http://jstor.org/stable/1762958> [12 December 2014] p. 588.

845 Formal or functional similarities are the criteria for typological arrangement. See Pitt-Rivers, 'Typological Museums', See also Chapter One: 'Notes and Queries'.

846 See Ira Jacknis 'Franz Boas and Exhibits: On the Limitations of Museum Method of Anthropology', in *Objects and Others Essays on Museums and Material Culture,* pp. 75–111, p.77.

847 Otis Mason, 'Throwing-Sticks in the National Museum', *Report of the Smithsonian 1883–84*, **2,** (1890), pp. 279–89, p. 279.

848 Mason, 'Throwing-Sticks in the National Museum', p.279.

thinking and the principle of arrangements in ethnological museums.[849] In the first of these, 'The Occurrence of Similar Inventions in Areas Widely Apart', [850] Boas begins with a presentation of Mason's arguments:

> The leading idea of Otis T. Mason's writings on ethnology is his attempt to classify human inventions and other ethnological phenomena in the light of biological specimens.[851]

Boas cites Mason's proposition that human inventions and artefacts can be organised into 'families, genera and species' and understood as the 'products of specific evolution'.[852] Boas proceeds to explain that:

> from this standpoint Professor Mason has arranged the ethnological collections of the national museum according to objects, not according to the tribes to whom they belong, in order to show the different species of throwing-sticks, basketry, bows etc.[853]

Boas is cautious about the drawing of analogies across the boundaries between different disciplines: to draw by comparison analogies between evolution and ethnology was, Boas thought, unwise.[854] Mason had, Boas argued, 'in regarding the ethnological phenomenon as a biological specimen'[855] introduced 'rigid abstractions'[856] into ethnology. This application of evolutionary thinking, Boas asserted, was clumsy and disregarded the subtleties that evolutionists had themselves needed to develop with regard to their objects of interest:

> It is only since the development of the evolutional theory that it became clear that the object of study is the individual, not abstractions from the individual under observation. We have to study each ethnological specimen individually in its history and medium.[857]

Boas writes that 'classification is not explanation'[858] and that comparison

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849 Stocking, the preface to Franz Boas, *A Franz Boas Reader: The Shaping of American Anthropology, 1883–1911,* p. 1.

850 Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart'.

851 Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart', p. 485.

852 Boas citing Mason, 'The Occurrence of Similar Inventions in Areas Widely Apart', p. 485.

853 Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart', p. 485.

854 Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart', p. 485. and Boas, 'Museums of Ethnology and Their Classification,' p. 589.

855 Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart', p. 485.

856 Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart', p. 485.

857 Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart', p. 485.

858 Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart', p. 485.

through analogy 'may be a successful method for *finding* problems',[859] but it does not, in itself, supply the answers.

Boas sets out here to refute Mason's assertion that 'in human culture, as in nature elsewhere, like causes produce like effects'.[860] Boas proposes instead an historical method. Similar outcomes do not necessarily have similar causes, argued Boas, because 'the physiological and psychological state of an organism at a certain moment is a function of its whole history'.[861] Boas writes that one cannot base the judgement of character and future outcome on present appearance but must take account of the organism's whole history, which is partly a function of its surroundings: for this reason 'the only way to show the single phenomenon is in its peculiar character and surroundings'.[862] Boas advocated the showing of items in collections alongside other items from the same cultural context, not in evolutionary sequences of items with similar visual qualities deracinated from their geographical and cultural context. Classification, in his view, should be relative to context.[863]

I would argue that Boas suggests that Mason's position is a kind of literary chiasmus. Mason's assertion, according to Boas, has two clauses: the first is the proposition that 'in human culture, as in nature elsewhere, like causes produce like effects',[864] and the second reverses this to state that like effects have like causes. Boas does not accept this:

> The outward appearance of two phenomena may be identical, yet their immanent qualities may be altogether different: therefore argument from analogies of outward appearance, such as shown in Professor Mason's collections, are deceptive. These remarks show how the same phenomena may originate from unlike causes, and that my opinion does not at all strive against the axiom, 'Like effects spring from like causes,' which belongs to that class of axioms which cannot be converted. Though like causes have like effects, like effects have not like causes.[865]

859 Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart', p. 485. See also Boas, 'The Principles of Ethnological Classification', p. 588.

860 Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart', p. 485.

861 Boas, 'The Principles of Ethnological Classification', p. 589.

862 Boas, 'The Principles of Ethnological Classification', p. 588.

863 Boas, 'The Principles of Ethnological Classification', p. 589.

864 Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart', p. 485.

865 Boas, 'The Principles of Ethnological Classification', p. 589.

Boas's repost is that Mason has left out of his list of causes, the one cause that cancels all others.

> In his enumeration of causes of similar inventions, one is omitted, which overthrows the whole system: unlike causes produce like effects.[866]

Boas takes Mason's apparently chiastic argument for analogous thinking and through a reversal with an added negation shows that all the other arguments that Mason had derived from reasoning by analogy were insupportable. Boas reinterprets Mason's chiastic axiom to make it read: 'Though like causes have like effects, like effects have not like causes'.[867]

Susan Hegeman describes the effect that Boas's work had upon the practice of ethnographic categorisation as follows:

> Its central intervention was one of changing the axis of categorization and differentiation from the evolutionary-teleological terms of comparative levels of technical mastery to the geographical-spatial considerations of the location in which the items were produced.[868]

Boas's work flipped the axis from a temporal to a spatial relation. I find this a useful way of visualising the significance of Boas's work for my discussion of transposition and refractive readings in this thesis. To re-cap, in light of Hegeman's conception of Boas as 'changing the axis', it is not the use of analogy per se that Boas disputes but the coordinates of transformation by which these analogies are applied. In the case of ethnology and its artefacts, the transposition of analogies along the evolutionary–teleological axis negates history. Boas, by categorising the products of culture along the geographical–spatial axis instead reintroduces an attention to the historical conditions and specificities of artefacts' development.

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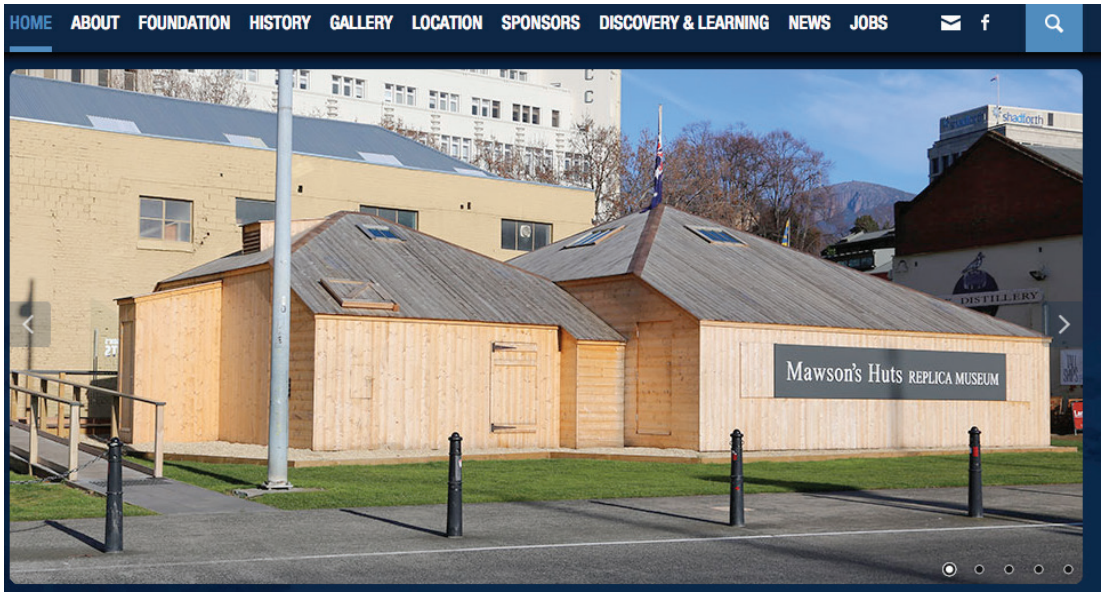
866 Boas, 'The Occurrence of Similar Inventions in Areas Widely Apart', p.485. It is important to note that in evolution the situation where 'unlike causes produce like effects' would be known as convergence, and, confusingly the convergent similarities would be known as analogous evolution as opposed to homologous evolution, meaning that the same familial line of evolutionary descent is shared.

867 Boas, 'The Principles of Ethnological Classification', p. 589.

868 Susan Hegeman, *Patterns for America: Modernism and the Concept of Culture* (Princeton, New Jersey: Princeton University Press, 1999), p. 36.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Mawson's Huts REPLICA MUSEUM

Fig 5.6

The Hut and the Museum

Wilson and his wife Oriana arrived in Hobart on Thursday 29 September 1910, disembarking from the R.M.S. Corinthic.[869] As tourists, they might have looked to the Hobart Museum of that time to offer some education and entertainment. Had they visited the Hobart Museum, they would have seen the display case containing the skeleton of Truganini, an indigenous Tasmanian woman. As Peter Fry describes in an article in *The Age*, Truganini had died in 1876, after which her skeleton was put on display in 1904 and stayed there until 1947.[870] Tasmania was known in Wilson's time as an infamous example of a territory in which the British colonial extermination of the indigenous people to the point of extinction had occurred.[871] The clearance of the indigenous population from the interior had been facilitated by their easily assembled huts, the design of which Antarctic expedition shelters shared. Fry writes that 'Truganini […] was widely and erroneously described as the "last" Tasmanian Aborigine'.[872] Stocking also describes the mythical extinction of aboriginal Tasmanians as 'the extinction of paleolithic man',[873] and explores how discussion around the extinction was bound up in a discourse of social Darwinism. Stocking argues that stories of the Tasmanians' extinction suited the interests of those who wanted to take it as demonstrable proof of the natural progress of history: the extinction was mythical in that it did not happen; but the discourse of extinction corroborated the theory of survival of the fittest, the proof of which was the eradication of backward and primitive people. The indigenous rights of descendants of Tasmanian aboriginals are the subject of continuing disputes.[874]

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869 *Sydney Morning Herald* (NSW: 1842–1954) 'For the Antarctic. Captain Scott's Expedition. Scientists' Intentions', Saturday 1 October 1910, p.13. See also Wilson, *Diary of the 'Terra Nova' Expedition to the Antarctic 1910–1912,* p. 46.

870 Peter Fry, 'Remains of Truganini coming home after 130 years', *The Age*, <theage.com.au/articles/2002/05/28/1022569769905.html> [8 May 2015]. See also George W. Stocking, 'The Extinction of Paleolithic Man', in *Victorian Anthropology*, pp. 274–83, p. 280.

871 Stocking, 'The Extinction of Paleolithic Man', *Victorian Anthropology*, pp. 274–83.

872 Fry, 'Remains of Truganini coming home after 130 years'.

873 Stocking, 'The Extinction of Paleolithic Man', *Victorian Anthropology*, pp. 274–83.

874 Richard Flanagan, 'The Lost Tribe' *Guardian*, 14 October 2002 <www.theguardian.com/world/2002/oct/14/australia.features11> [28 July 2015], paras 29.

On Monday, 2 December 2013, a new tourist attraction opened on the Hobart Harbour in the southern-most city of Australia: the Mawson's Huts Replica Museum (Fig 5.6). Its opening marked 'the 102nd anniversary of the departure'[875] in 1911 of the Australasian Antarctic Expedition from Hobart, Tasmania to explore the sectors of Antarctica immediately to the south. The museum was made as a facsimile of the hut established by Douglas Mawson at Cape Denison between 1911 and 1914. This hut was similar to the hut designed by the Australian outgoing chief of science Professor Gregory for the Scott *Discovery* expedition in 1901 (Fig 2.7) established on the rocky peninsula, known as Hut Point, which curved around the bay. The second *Terra Nova* expedition occupied a different and more suitable hut at Cape Evans.

The hut at Hut Point was roundly despised by all the crew: 'it was too large to heat with the amount of coal available, and was rather a white elephant'.[876] The ship was occupied in preference, as it remained ice bound in McMurdo Sound during the winter months and the intervening summer. The hut was so unsuitable for the climate that it was unused for its intended purpose of accommodation but acted rather as a storehouse and also provided the venue for the weekly lectures.[877] Shackleton recalled 'a large strong building, but […] so draughty and cold in comparison with the ship, which was moored one hundred yards away, that it was, during the first year, never used for living quarters'.[878]

One has to wonder how the designs for expedition huts during the heroic era should have been so unsuited to the Polar conditions for which they were destined. This wooden structure with a verandah known as 'Professor Gregory's Lodge', and other expedition huts like it, were modelled on the temporary, easily assembled colonial structures, constructed by Europeans, and

875 See home page of Mawson's Hut Replica Museum < http://www.mawsons-huts-replica.org.au/about-mawsons-huts-replica-museum/#/0> [20 May 2014].

876 Cherry-Garrard, *The Worst Journey in the World*, p. 161.

877 Williams, *With Scott in the Antarctic*, p. 129.

878 Ernest Shackleton, *South! The Story of Shackleton's Last Expedition 1914-1917*, (London: Robson Books, 1999), p. 371.

based upon a design for an Australian outback hut.[879] The Mawson's huts were prefabricated and, like 'Gregory's Lodge', also featured verandahs on three sides, marking the structure out as more suited to a sub-tropical climate.[880] Thus, The Mawson Antarctic Heritage Hut was originally based upon a vernacular design brought to Australia that consisted of influences from many other 'elsewheres'.

In the Mawson's Huts Replica Museum, the 'elsewhere' of Antarctica is brought to the 'here' of the contemporary Australian waterfront. The curators, rather than making an arrangement of fragments, have made a facsimile of the original and entire building in its proportions and materials. The hut appears complete and whole. Yet the experience of this hut as it is transposed in the process of replication effaces the atmosphere of its origins and eradicates the marks of history. The visitor to the Mawson's Huts Replica Museum can step into a real space with the same dimensions as the original, and made of the same material as the original but with marks of use and time expunged. The original huts themselves have been in situ for over a century, and are iced and ruined, in a state of decay. In contrast, the facsimiles have been re-made as brand new, restored to the moment before they were used, unoccupied by people and unweathered by the climate in which they were set down. This hut has been reproduced in the absence of the atmosphere of the elsewhere that the real Mawson Huts still occupy. As a visitor on the Hobart Harbour enters into this replica, the difference is the climate.

What does it mean for the climate to be so disregarded and ignored? The Mawson's Huts, in their squeaky clean wood, divested of the marks of age and use, have been retouched like the digitally scanned silver glass plate negatives in the *Freeze Frame* archive, a retouching which 'remov[es] the signs of wear and tear',[881] in the process of digitisation. In an odd way the disregard for

879 Bob Headland, 'Antarctica's Heritage under Threat', *Geographical*, **76**, 8 (2004), p. 26; and B.W. Held et al., 'Deterioration and Conservation Issues Associated with Antarctica's Historic Huts', in *Art, Biology, and Conservation: Biodeterioration of Works of Art,* ed. by Robert J. Koestler et al. (New York: The Metropolitan Museum of Art, 2003), pp. 370–87, p. 372.

880 See Michael Pearson's analysis of the design of the nine Antarctic huts of the heroic era. Michael Pearson, 'Expedition Huts in Antarctica: 1899–1917', *Polar Record,* **28**, 167 (1992), pp. 261–76.

881 See seventh paragraph in *Freeze Frame historic polar images*, Scott Polar Research Institute, Cambridge University. Single A4 leaflet.

climate recalls the failure of the design of the first hut at Hut Point to address the Polar conditions for which it was intended, fashioned as it was along the lines of an Australian outback dwelling.

The Mawson's Huts Replica Museum presents an eerie absence of the expedition protagonists, either to the online visitors to the webpages of the Mawson Hut Replica Museum, or to on-site visitors. The reconstructed facsimile presents the renewed version of the Hut, including clean grey blankets, stripy pillowcases and clean jackets. And there, beside Mawson's bunk, is a childish toy, brightly coloured in blue, yellow and black against the tan of the wood; the eyes of a gollywog doll stare back (Fig 5.7).

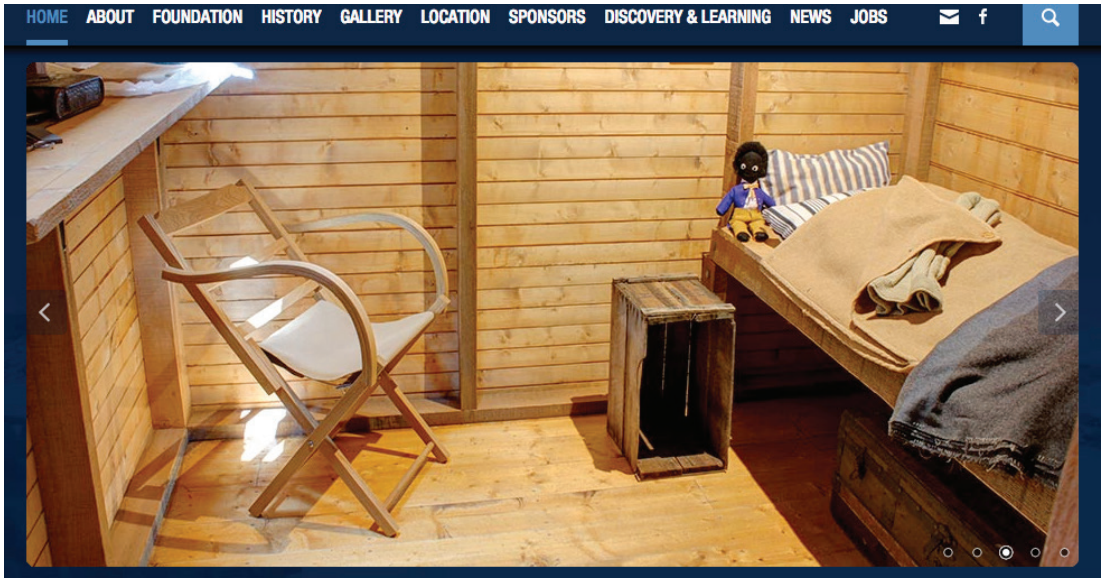
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Fig 5.7

The View from Nowhere A View from Somewhere

> The immediate duty of an observer is to observe, and the mingling of theories with ascertained facts should be rigorously avoided.[882]

The 1929 edition of *Notes and Queries on Anthropology* proposed that it was possible to make observations without the distortion of an intervening theory, and that such observations would result in a proper kind of knowledge. The duty of the observer may have been immediate but the observations were not: the *method* of observation was not beyond the distortions of interpretation.

Lorraine Code argues that her vision of ecological thinking, 'distances itself from the atomistic individualism according to which solitary individuals, extracted from the particularities of situation and place, can claim knowledge on the basis of their "own" unmediated observations'.[883] Similarly, Donna Haraway's take on observation is to call for embodied objectivity. Haraway says that 'Man' and 'White' have falsely assumed the 'unmarked position' from nowhere while making the others, 'non-white' and 'non-man', become the vehicles for carrying visibility and objectification.[884]

> I would like to insist on the embodied nature of all vision and so reclaim the sensory system that has been used to signify a leap out of the marked body and into a conquering gaze from nowhere.[885]

The term she has developed, 'situated knowledges', shows that knowledge from nowhere that makes itself applicable everywhere is not acceptable. 'Feminist objectivity means quite simply *situated knowledges*'.[886] Haraway insists that all vision must be understood as particular and embodied: that vision must not be a 'route to disembodiment and second-birthing'.[887] According to Haraway, vision, like objectivity, must be interrogated and re-educated, and must be re-

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882 *Notes and Queries,* 5th edn, ed. by British Association for the Advancement of Science by a Committee of Section H (London: The Royal Anthropological Institute, 1929), p. ix.

883 Lorraine Code, *Ecological Thinking,* p. ix.

884 Donna Haraway, 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective', *Feminist Studies,* **14**, 3 (1988), pp. 575–99, p. 581.

885 Haraway, 'Situated Knowledges', p. 581.

886 Haraway, 'Situated Knowledges', p. 581.

887 Haraway, 'Situated Knowledges', p. 582.

claimed and made usable again.[888]

888 See the work of cultural geographers such as Doreen Massey, *Space, Place and Gender* (Cambridge: Polity Press, 1994) and Gillian Rose, *Feminism and Geography: The Limits of Geographical Knowledge* (Cambridge: Polity Press, 1991). Also Lisa Bloom's writing that interrogates the narratives of exploration in Lisa Bloom, *Gender on Ice: American Ideologies of Polar Expeditions* (Minneapolis: University of Minnesota, 1993).


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Fig 5.8

Avant-garde **Rear-guard**

> Where there is an avant-garde, generally we also find a rear-guard. True enough – simultaneously with the entrance of the avant-garde, a second new cultural phenomenon appeared in the industrial West: that thing the Germans give the wonderful name of Kitsch.[889]

Although art critic Greenberg later repudiated and revised this earlier definition of rear-guard as Kitsch, in this definition Kitsch is defined in contrast to the avant-garde as a reactionary and conservative force of low culture. According to Greenberg, Kitsch is false immediacy, seductive and deceptive.[890]According to Greenberg, Kitsch undermines modernism, 'using for raw materials the debased and academicized simulacra of genuine culture'.[891]

Greenberg's essay 'Avant-garde and Kitsch' was written in 1939, a year before his 1940 'On a Newer Laocoon' and in this thesis I read them as partner pieces. Both essays deal with the limits of certain domains and the shifts that occur when boundaries are crossed between those domains. In 'Avant-garde and Kitsch', the boundary that is crossed is between high and low art, and in 'On a Newer Laocoon' the boundary crossed is between painting and literature.

> 'If the avant-garde imitates the processes of art, kitsch, we now see, imitates its effects'[892]

From another point of view, Felix Driver has described a movement through which the artefacts of Antarctic heroism change from authentic documents in the archive to camp art exhibit. Driver recounts from the newspaper story in the *Guardian*[893] how 'Scott's South Pole Biscuit was auctioned for £4,000', and uses this as an example of the escalating commodification of the artefacts and relics of heroic exploration.[894] The front cover of the Camping & Caravanning Club's magazine pictures Scott, president of the club from 1909 to 1912, on

889 Clement Greenberg, 'Avant-Garde and Kitsch', p. 39.

890 Greenberg, 'Avant-Garde and Kitsch', p. 40.

891 Greenberg, 'Avant-Garde and Kitsch', p. 40.

892 Greenberg, 'Avant-Garde and Kitsch', p. 44.

893 Fiachra Gibbons, 'Scott's South Pole Biscuit Auctioned for £4,000', *Guardian*, 18 September 1999, p. 11.

894 Driver, *Geography Militant: Cultures of Exploration and Empire*, p. 216.

the centenary of his death (Fig 5.8).[895] The outer tent in which Bowers, Scott and Wilson perished was brought back to London and put on display in 1913 and exhibited at Earl's Court. Driver writes that these artefacts, 'like artworks […] are increasingly treated as investments'.[896] Recounting a visit to the exhibition *The Maybe* at the Serpentine Gallery, Hyde Park, London, Driver describes how:

> two of the most endearing symbols of the age of exploration had finally come to rest in one of the most avant-garde of galleries; once at the frontiers of exploration, now at the frontiers of art?'[897]

I suggest, however, that Driver's use of the word '*avant-garde*' is not the same as Greenberg's, and what Driver is describing might better be though of as contemporary or cutting-edge art. Driver does, though, suggest that his use of the term '*avant-garde*' is somewhat ironic, knowing, or that it is, as it were, written in quotation marks, or as is actually the case in his text, in italics:

> Perhaps it is the historian in me which refuses to celebrate the *avant-garde* without at least a glance over my shoulder.[898]

In Driver's book *Geography Militant*, the phase of imperial and heroic exploration undertaken by geographers is for him characterised by the application of particular scientific methods and the gathering of data: he defines what he calls 'Geography Militant' as a 'worldly quest for empirical knowledge about the geography of the earth marked by voyages of exploration by sea and land'.[899] Driver says that he is 'concerned with the reproduction of the motifs of Geography Militant within the realms of public culture'.[900] As with Greenberg's assessment of kitsch, which is related to the avant-garde by defining distinct and contrasting domains of high culture and popular culture, Driver notes similar contrasting domain of the specialist or professional explorer versus that of the explorer as manifested in public culture. Driver

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895 *Camping & Caravanning*, **10**, January, (2012).

896 Driver, *Geography Militant: Cultures of Exploration and Empire,* p. 216.

897 Felix Driver, 'Old Hat, I Presume? History of a Fetish', *History Workshop Journal,* **41** (1996), pp. 230–34, p. 232.

898 Driver, 'Old Hat, I Presume? History of a Fetish', p. 232.

899 Driver takes the phrase and its characterisation from an essay by Joseph Conrad titled 'Geography and some explorers', published in the *National Geographic* in 1924.

900 Driver, *Geography Militant: Cultures of Exploration and Empire,* p. 201.

notes that the shift from professional explorer to public presentation of exploration often produces 'camped-up'[901] forms. For Driver these have rather more positive value than Greenberg's version of kitsch.[902]

> Victorian myths of heroic exploration are given new life: far from being residual hangovers from the nineteenth century, or merely repetitions of well-worn tropes, they are regenerated in new, often camped-up, guises.[903]

Susan Sontag makes the following useful distinctions between Kitsch and camp in her 1964 essay 'Notes on "Camp"'.[904] Here Kitsch is attributed to the objects of these populist interpretations, whereas camp is related to a way of performing the consumption of that culture. Sontag makes a further distinction between the naivety often associated with Kitsch as opposed to the knowingness that accompanies camp. 'Camp' Sontag writes, 'sees everything in quotation marks'.[905] Perhaps, the positive aspect that Driver attributes to camp is due to this in-quotation-marks 'knowingness'.

Yet in exploration, Kitsch re-enactments abound in the rash of centennial recreations of historic polar journeys, the authenticity of which often relies upon claims of genetic descent in which grandchildren or great-nephews and great-neices take up their ancestral destiny. For example, a recent edition of *The Explorers Club* journal from Winter 2008–2009 describes the Shackleton Centenary Expedition in which 'great-grandsons and descendants' repeat the exploits of Shackleton's Imperial Trans-Antarctic Expedition of 1915–16.[906] And in another example, Tim Jarvis has also recreated Sir Douglas Mawson's Australasian Antarctic Expedition 1911–1912:

> The expedition, completed in April 2007, recreated Sir Douglas Mawson's famous survival journey of 1912 in which both his colleagues died. The modern expedition used the same clothing, equipment and starvation rations

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901 Driver, *Geography Militant: Cultures of Exploration and Empire,* p. 201.

902 Driver, *Geography Militant: Cultures of Exploration and Empire*, p. 201.

903 Driver, *Geography Militant: Cultures of Exploration and Empire*, p. 201.

904 Susan Sontag, 'Notes on 'Camp", in *Against Interpretation and Other Essays* (New York: Octagon Books, 1978), pp. 275–92.

905 Sontag, '*Notes on 'Camp'*, p. 280.

906 Smith, Nick, 'Polar Centennials', *The Explorers Journal*, **86**, 4 (Winter 2008–2009), p. 12, <https://explorers.org/journal/winter08.pdf >[27 August 2015] ; Jarvis, Tim, '2013 Expedition' Shackleton Epic <http://shackletonepic.com/2013-expedition/> [25 September 2014];Shackleton Centenary, 'Matrix Shackleton Centenary Expedition', The Shackleton Foundation, 2 January 2007,<www.shackletoncentenary.org/foundation/> [26 August 2015]

> as Mawson had available to him in 1912 to test the theory as to whether he needed to cannibalise his fallen colleague to survive.[907]

In contrast, contemporary artists often *use* camp techniques and strategies of Kitsch in works that use re-enactment in a self-reflective way for producing camp critiques of the explorer ethos and the myth of original genius.[908]

It is this myth of original genius and the fantasy of self-invention of avant-garde art and its artists that Rosalind Krauss critiques in *The Originality of the Avant-Garde*:

> More than a reflection of the past, avant-garde originality is conceived as literal origin, a beginning from ground zero, a birth[…] The avant-garde artist above all claims originality as his right – his birthright, so to speak. With his own self as the origin of his work, that production will have the same uniqueness as he; the condition of his own singularity will guarantee the originality of what he makes.[909]

My sympathies lie with what Krauss has described as the 'post-medium condition' of some current art.[910] She writes that 'the specificity of mediums, even modernist ones, must be understood as differential, self-differing, and thus as a layering of conventions never simply collapsed into the physicality of their support'.[911] Claire Bishop makes the point that the medium of installation art might be the 'viewer's presence', but that Krauss does not allow for this aspect of medium in her essay.[912] The approach is not, Krauss asserts, the impossible 'retreat into etiolated forms of the traditional mediums' but to compare outmoded forms in their differential specificity. Krauss means by this that we should to take notice of 'the inner complexity'[913] of mediums, which is especially perceptible in the comparison between outmoded forms and current forms.

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907 < http://www.timjarvis.org/expeditions/sir-douglas-mawson-antarctic-journey/> [25 September 2012].

908 See, for example, Pierre Huyghe's successful critique of the romance of these types of exploration narrative in *A Journey That Wasn't* (2005).

909 Rosalind Krauss, 'The Originality of the Avant-Garde', in *Art in Theory 1900–2000: An Anthology of Changing Ideas,* ed. by Charles Harrison and Paul Wood (Oxford: Blackwell, 2004), pp. 1032–37.

910 Rosalind Krauss, *'A Voyage on the North Sea': Art in the Age of the Post-Medium Condition*. (New York: Thames and Hudson, 2000).

911 Krauss, *'A Voyage on the North Sea'*, p. 53.

912 Claire Bishop, 'Antagonism and Relational Aesthetics' *October* **110** (Fall 2004), pp. 51–79, p. 64.

913 Krauss, *'A Voyage on the North Sea',* p. 53.

Discovery in art is sometimes resurrected through the re-working of the earlier avant-garde manoeuvres founded on an originality that was itself a myth. I argue that 'avant-gardism' defined as a push into new territory is no longer a possible contemporary strategy. The reworking of those earlier moves could be seen as a form of *ekphrasis* and as a shift elsewhere in camp knowingness. I propose that making art works through the archive with a combination of Krauss's post-medium condition and an appropriation of Greenberg's rear-guard as 'rear-guard action', can be likened to a process of *ekphrasis* that can create elsewheres.

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Fig 5.9

THE INDISPENSABLE GEISHA

Fig 5.10

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Fig 5.11

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Fig 5.12

Hints to Travellers **Lantern Lecture 2013**

Magic lantern shows and *tableaux vivantes* can be seen as antecedents to film.[914] Although now outmoded or extinct as a medium, they were the popular forms of their time. Presented with narration and music, they were equally likely to take place in a domestic drawing room as in a public hall.[915] The lantern-slide show was used for telling art histories and as a vehicle for disseminating the tales of geographical exploration.[916]

On his return to the United Kingdom in 1913, with the death of his friends weighing heavily upon him, Herbert Ponting took part in lectures with the magic lantern slides and with the film that he had shot whilst in Antarctica.[917] This Ponting recalled in his book *The Great White South*:

> In view of the tragic ending to the enterprise, I felt it more than ever incumbent on me, as the holder of the lecturing rights, to conform to the wishes my late Chief had expressed to me, by carrying out my original plans. A beautiful series of films and lantern slides of the adventure, and the of the Nature life of the South, was therefore arranged, and to these I lectured at a London Hall for ten months in 1914, until the outbreak of the Great War ended what had been a highly successful beginning to a novel feature in the entertainment world.[918]

In a promotional image taken of Ponting, we see the earlier explorer reduced to Kitsch: un-goggled, wearing a suit, waistcoat and tie, and posing with a cuddly toy penguin (Fig 5.9).[919]

Ponting must have thought of his absent friends and of the earlier lantern lectures he gave as part of the expedition's activities. These were scheduled to help pass time in the hut, to entertain and educate during the months of

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914 James Monaco, *How to Read a Film: Movies, Media and Beyond* (Oxford: Oxford University Press, 1977), p. 83. See also Stephen Herbert, 'Dissolving Views', in *A History of Pre-Cinema,* Vol 3 (London: Routledge, 2000), pp. 81–100.

915 Herbert, *History of Pre-Cinema,* Vol 3, p. 94.

916 Charlotte Fiell and James Ryan *Memories of a Lost World: Travels Through the Magic Lantern* (London: Goodman, 2013): Emily Hayes 'Geographical projections: Lantern Slides, Science and Popular Geography at the RGS, 1886–1893', presented at the *International Conference of Historical Geographers,* London, 5–10 July 2015.

917 Luke McKernan, 'The Great White Silence: Antarctic Exploration and Film', in *South: The Race to the Pole,* (London: National Maritime Museum, 2000), pp. 91–103.

918 Herbert Ponting, *The Great White South: or with Scott in the Antarctic*, (London; Gerald Duckworth and Co., 1949), p. 292.

919 The cuddly toy penguin is now held at the National Maritime Museum, Greenwich.

darkness of the Antarctic winter. Scott recounts in his diary the initial plans for a round of entertaining lectures.

> Tues. Apr. 28th To-day I have organised a series of lectures for the winter; the people seem keen and it ought to be exceedingly interesting to discuss so many diverse subjects with experts. We have an extraordinary diversity of talent and training in our people; it would be difficult to imagine a company composed of experiences which differed so completely. We find one hut contains an experience of every country and every clime. What an assemblage of motley knowledge![920]

The knowledge that constituted this assemblage was held in the persons of amateur geographers, men who had been part of colonial missions to far-off regions of the world, or who had travelled in the navy.[921] The men of the expedition might have constituted the type of traveller to whom *Notes and Queries* and *Hints to Travellers* were addressed.

Ponting was also one of these travellers, and was hired by Scott in light of his experience and renown as a documentary photographer.[922] Prior to the Antarctica expedition Ponting had completed a tour of Japan, and from that visit had published a successful book of tinted photographs titled *In Lotus Land Japan* and given associated lantern-lectures (Fig 5.10).[923] Scott recalled in his diary, 'To-night Ponting gave us a charming lecture on Japan with wonderful illustrations. He is happiest in his descriptions of the artistic nature of the people, with which he is in fullest sympathy.' [924] Cherry-Garrard wrote that 'Ponting's lectures' gave them 'glimpses into many lands illustrated by his own inimitable slides' and that they 'lived every now and then for a short hour in Burmah[*sic*], India or Japan, in scenes of trees and flowers and feminine charm which were the very antithesis of [their] present situation'.[925] Ponting staged a few portraits of himself giving this ethnographic lecture on Japanese culture. In one, Ponting wears a hat, and is seen in the foreground of the

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920 Scott, *Scott's Last Expedition,* Vol. 1, p. 251.

921 David M. Wilson, *The Lost Photographs of Captain Scott* (London: Little Brown, 2011) pp. 175–6.

922 Herbert Ponting, *The Great White South* (New York: Robert M. McBride & Co., 1922), pp. 1–2.

923 Herbert Ponting, *In Lotus-Land Japan* (London: Macmilllan and Co., 1910).

924 Scott, *Scott's Last Expedition,* Vol. 1, p. 292.

925 Cherry-Garrard, *The Worst Journey in the World,* p. 218.

image, operating the lantern (Fig 5.11).[926] The Scott Polar Research Institute archive summary text reads 'in the interior of the hut, Ponting stands at a projector mounted on a tripod. Expedition members sit in chairs in rows in front of the screen. Sleeping bags hang from the ceiling'.[927] In this photograph the bright beam of light appears on the screen as an overexposed white-out. There is another version in this sequence, in which Ponting, using his post-production skills in manipulating images in the darkroom, has superimposed an image from the lantern-slide lecture so that the documentary photograph gives a better impression of the event. The lantern slide that Ponting chose to add was that of a Japanese lady playing a musical instrument (Fig 5.12).[928] This same image in his book is titled 'the indispensible geisha'.[929] She is playing the shamisen, a three stringed instrument comparable to the banjo, which was an instrument that Ponting himself was known to play.[930]

My artwork *Lantern Lecture* (2013) re-enacted the lantern lecture of the expedition hut in 1911 (Fig 5.13). Like an explorer of Antarctica, journeying through the archive, I assembled a slide show to share my findings and showed this as a lecture as part of my show *No More Elsewhere* at Danielle Arnaud, London.[931] I specifically asked an 'Englishman' in the audience to volunteer to read Wilson's 'notes towards a lecture on sketching',[932] that Wilson had prepared for one of the evening lectures in the Hut. Wilson, who was much impressed by Ponting, had added on one of the facing pages to his notes on sketching the following reminder:

> Ponting to say something re. Japs and their art/ imitative and imaginary.[933]

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926 See Herbert Ponting, 1911 *Herbert Ponting lecturing on Japan* (glass plate negative), Scott Polar Research Institute, University of Cambridge. Accession number: P2005/5/542.

927 Herbert Ponting, 1911 *Herbert Ponting Lecturing on Japan* (glass plate negative), SPRI P2005/5/542.

928 Herbert Ponting, *Herbert Ponting Lecturing on Japan*, 16 October 1911 (glass plate negative), SPRI P2005/5/543.

929 Herbert Ponting, 'The Indispensible Geisha', in *In Lotus-Land, Japan*, between pages 94 and 95.

930 Wilson, *Diary of the Terra Nova Expedition to the Antarctic 1910–1912* (London: Blandford Press, 1972), p. 84.

931 *Lantern Lecture* 2013, performed at Danielle Arnaud, London, 16 June 2013, as the closing event of the author's solo exhibition *No More Elsewhere*.

932 Wilson, 'Notes for a Lecture', MS 1225/3.

933 Wilson, 'Notes for a Lecture', MS 1225/3.

In *Lantern Lecture* I took Ponting's place as the magic lantern operator, but added a data projector, with which I projected the archive images of Ponting lecturing on Japan. The first image that I projected showed Ponting presenting the lantern show with the blank screen. This then dissolved gradually to reveal, almost imperceptibly slowly, the lantern slide with the view of the Japanese woman in traditional dress. During the performance-talk, the sound of music could be faintly heard coming from the room directly below where the lecture took place. When the talk was over, the audience filed out and wandered down stairs to find a young Japanese man playing the shamisen (Fig 5.14). He was wearing black jeans, white shirt with a pencil-thin black tie, and was holding the instrument on a red cloth placed across his lap. He was striking the strings with a stick, he played three fast, beautiful, discordant pieces. The last he introduced as his own composition combining sounds of the traditional Japanese shamisen with Irish folk tunes.[934]

934 Hibiki Ichikawa played the shamisen.

This image permission is restricted to the print version only

Fig 5.13

Fig 5.14

Fig 5.15

Suiseki Bergs 2013 **Penguin Pool 2015**

Dissociated from the context of the words and gestures of their initial live performance, *Penguin Pool* 2015[935] reconstituted into a new narrative a set of lantern slides, bought on eBay, and performed as a lantern lecture.
One lantern slide that I found showed the Penguin Pool at London Zoo (Fig 5.15) designed in 1934 by Lubetkin (1901-1990) and his architectural practice, TECTON. Here the narrative of evolution came together with architectural formal modernism. In the Lubetkin design, 'an elliptical enclosure with central interlacing ramps forms a setting for the movements of the penguins'.[936] This is formally similar to the pattern of a chromosomal chiasma found in sexual reproduction, in which a pair of chromosomes cross over to exchange genetic data. The Lubetkin platforms lead nowhere but display the animals to great effect. This enclosure, as well as the Gorilla House that Tecton had completed in the previous year and other zoo projects, featured in the film *The New Architecture of the London Zoo* made by Laszlo Moholy-Nagy (1936).

> The use of reinforced concrete has allowed TECTON, the London Architects, great freedom in designing forms specially suited to the housing of animals, and sheltering and regulating the circulation of the public. The animals for the first time are no longer housed in artificial reproductions of their natural surroundings. The new buildings provide hygienic organic setting, the simplicity of which best displays the natural characteristics of the animals.[937]

In recent decades the zoo has been transformed from a site for the display of animals to a place for the conservation of the gene pool of endangered species.[938] *Penguin Pool* plays on the pun of 'pool' as an entertaining architectural design for zoological display and the more recent conception of the zoo as a place for the conservation of the threatened gene pool of endangered species. Both the gene pool and the archive are collections of information. Evolutionary ecology is currently being used to predict threats

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935 *Penguin Pool* 2015 was performed at Danielle Arnaud, London, 19 March 2015.

936 Film titles from *The New Architecture of the London Zoo* by Laszlo Moholy-Nagy (1936) black and white, silent, 15'30". Commissioned by MoMA, New York.

937 *The New Architecture of the London Zoo* by Laszlo Moholy-Nagy (1936)

938 See home page for Zoological Society London in which it is described as 'an international conservation and scientific charity based in the UK' <www.zsl.org> [2 August 2015].

posed to biodiversity from various potential extinctions.[939] Here the archive is also considered as a type of gene pool, as a collection of available data and information that can be drawn upon.

Penguin Pool 2015 looks to old texts to supply the citations. An illustrated natural history book from 1905 provided a number of extracts.[940] Although its title was *Living Animals of the World,* it read more as a compendium of killing for the purposes of collecting. Another book from 1905, Henry R. Knipe's *From Nebula to Man,* puts forward the story of geology in rhyming couplets.[941] Knipe introduces it as follows: 'Nebula to man is an attempt to present a sketch of the evolution of the Earth on the Nebular Hypothesis; to note also subsequent sea and land movements, and successive appearances of life, as revealed by the geological strata'.[942] It had the added interest of containing one illustration by Edward Wilson, 'Mr Wilson, fresh from his travels in "The Discovery" in Antarctic regions, has given us what must be a true picture of a large part of the surface of the earth during the great Glacial times'.[943] Wilson's own writing gives further quotes on penguin evolution in 'Some Notes on Penguins' from the *South Polar Times*, 1902,[944] and the film titles from *New Architecture of London Zoo* (1936), by Maholy-Nagy, featuring the Lubetkin penguin pool, also provided some of the citations. Other citations included Pitt-Rivers's *The Evolution of Culture and Other Essays* (1906):

> To continue the simile further, the propagation of new ideas may be said to correspond to the propagation of species. New ideas are produced by the correlation of previously existing ideas in the same manner as new individuals in a breed are produced by the union of previously existing individuals.[945]

I collected a variety of lantern slides and selected a set of forty-six in total to

939 Austin J. Gallagher, Neil Hammerschlag, Steven J. Cooke, Daniel P. Costa, Duncan J. Irschick, 'Evolutionary Theory as a Tool for Predicting Extinction Risk', *Trends in Ecology & Evolution*, **30**, 2 (Feb 2015), pp. 61–65.

940 See Peter Sloterdijk, 'Rules for the Human Zoo: A Response to the Letter on Humanism', *Environment and Planning D: Society and Space,* **27** (2009), pp. 12–28.

941 Henry R. Knipe, *From Nebula to Man* (London: J.M. Dent & co., 1905), p. v.

942 Knipe, *From Nebula to Man,* p. v.

943 Knipe, *From Nebula to Man,* p. viii.

944 Edward Wilson, 'Some Notes on Penguins', in *The South Polar Times,* Vol. 1, part IV, (London: Smith, Elder, & Co. 1907), pp. 3–9.

945 Pitt-Rivers, 'Principles of Classification 1874', *The Evolution of Culture and Other Essays*, p. 18.

project during the performance (Fig 5.16). I had made a set of glossy printed cards each of which had an image of one of the lantern slides printed on one side and a quote printed on the other. I had made my own combinations of image and text based upon a certain affinity that I perceived between the pair. These cards measured fifteen centimetres square. They were arranged in a grid pattern on a series of very shallow ledges. The cards were displayed with the picture showing. On their arrival, each member of the audience was asked to select a lantern slide card from the display in the entrance hall (Fig 5.17). Each member of the audience that selected a card unwittingly became responsible for the quote on the back. The less attractive cards remained unselected. Unselected cards meant unspoken citations in the performance.

Penguin Pool 2015 entailed a group effort to perform the narrative contained in the lantern-slide sequence. I had chosen the sequence for the lantern-slide show but the citations that would be spoken depended upon audience participation (Fig 5.18). The prompt to speak was the projection of the lantern slide on the wall. At that point, the person who identified themselves as possessing the card was passed the torch in order to read the text. People could choose to read out the quote, or stay silent, or to add some comment of their own.

I had made a collection of forty-six slides, the same as the number of chromosomes in the human genome. For a species to survive, its population must not reduce below an optimum number of individuals. We numbered less than the complete set of slides by about six to ten people. We were not numerous enough to perform the full text.

Fig 5.16

Fig 5.17

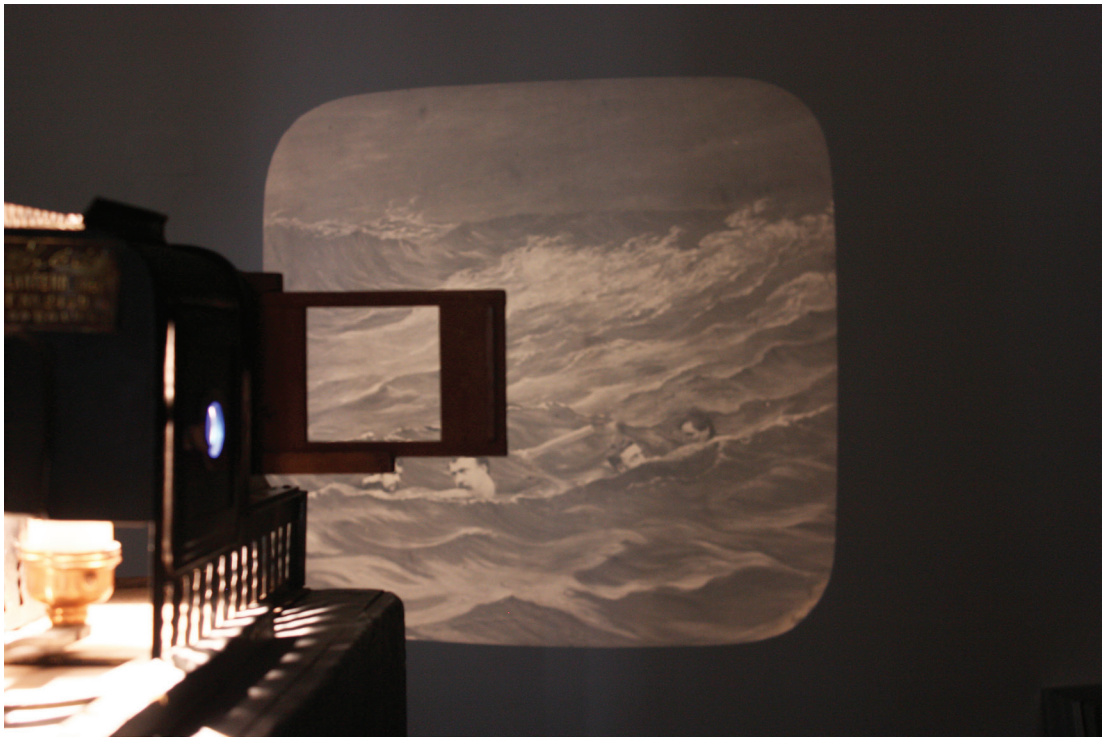


Fig 5.18

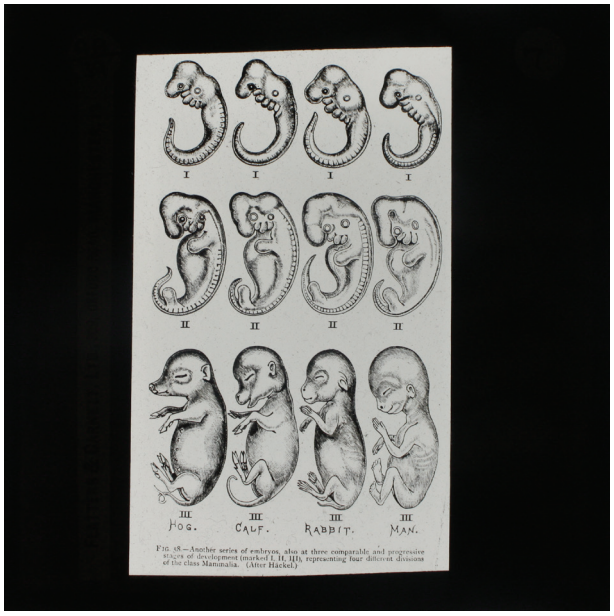


Fig 5.19

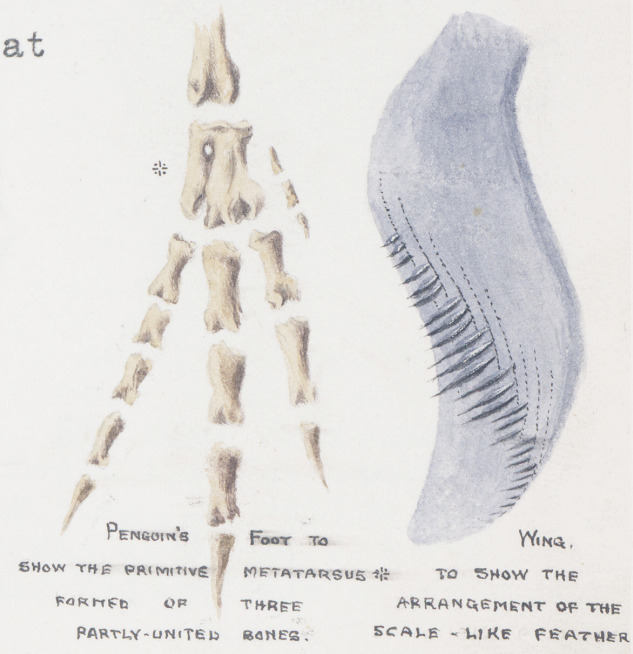
Next Fig 5.20

SOME NOTES ON PENGUINS

Penguins are undoubtedly a little old-fashioned in their appearance, but their looks are nothing like so old-fashioned as their history. They are really some of the most primitive, behind-hand birds in existence.

Apart from all deeper questions of internal anatomy, one can see this in the very uniformity of their feathering, which leaves none of the bare spaces of skin so characteristic of the general run of feathered fowls. Their feathers, moreover, are strongly suggestive of fish-scales; and in the wing, instead of having ten or twelve long primaries, they still keep some forty or fifty little scaly tufts which differ but slightly from the other feathers either on the wing or body. All these character--istics of course are suited to their life in water. Again, their method of moulting is more that of a reptile than of a bird. The feathers are shed, not singly, but in patches which are held together by a "slough" of skin, very much as a reptile sheds its scales in one continuous piece. I may say that this is what is generally held with regard to the Penguin's moult, but from what we saw of the moulting Emperor on board this ship, I think we may be allowed to swallow it with a grain or two of salt. Even Ornithologists sometimes make mistakes, being led astray by their own imaginations.

There seems to be no doubt that at one time Penguins flew, though of course at the time they were not exactly Penguins. From the same stock in all probability, came the Divers and the Grebes, the Albatrosses and the Petrels, their nearest living relatives. The Auks of the Northern Hemisphere, though similar in appearance, are not closely related, though in the North they fill much the same corner that the Penguins fill in the South. In the



PENGOIN'S FOOT TO SHOW THE PRIMITIVE METATARSUS * FORMED OF THREE PARTLY-UNITED BONES.

WING, TO SHOW THE ARRANGEMENT OF THE SCALE-LIKE FEATHER

Notes and Queries Some Notes on Penguins

> Much as the egg-collection means to me as a collection of reminiscences, it is permanent record of a cruelty I have come to hate in myself as well as in others. I am more inclined every year to leave a nest exactly as I found it.[946]

Despite the regret Wilson felt for the nest burglary that he committed as a child, as an adult ornithologist he undertook a nest-thieving episode of epic proportions. In *The Worst Journey in the World*, Apsley Cherry-Garrard gave an account of this expedition to Cape Crozier that he undertook with Edward Wilson and Henry Bowers in the Antarctic mid-winter of 1911. On the trip they endured the most horrendous conditions. They returned to the Hut with three specimens.

Edward Wilson had hoped to prove the recapitulation theory, the theory that ontogeny recapitulates phylogeny, through observation of the reproductive natural history of this bird: the egg as an archive of evolutionary history (Fig 5.19). Wilson undertook this endeavour as he was keen to supply the evidence required to support the theory of recapitulation put forward by the prominent Darwinist, Ernst Haeckel (1834–1919). Wilson expected that the analysis of Emperor penguin eggs would unlock insights into evolution. In the 1900s the penguin was understood to be an archaic bird and it was hoped that research would reveal its dinosaur ancestors.[947] Haeckel's theory proposed that ontogeny (the development of embryonic form) recapitulates phylogeny (the development or evolution of a kind or type of animal), that is, that the foetal development of a species is analogous to its evolutionary development.[948]

Wilson expanded upon his view of some of these thoughts in his second lecture, in which 'he traced the descent of Penguins from the primitive lizard-bird, explaining their anatomy, and finding corroborative evidence in their prehistoric fossilized remains',[949] and in an essay titled 'Some Notes on Penguins' that he contributed to the *South Polar Times* (Fig 5.20). In this essay

946 Wilson, cited in George Seaver, *Edward Wilson Nature-Lover*, p. 4.

947 Wilson, 'Some Notes on Penguins', pp. 3–9.

948 Stephen J. Gould, *Ontogeny and Phylogeny* (Cambridge: The Belknap Press of Harvard University, 1977).

949 Seaver, *Edward Wilson of the Antarctic,* p. 240.

he wrote:

> Penguins are undoubtedly old-fashioned in their appearance, but their looks are nothing like so old-fashioned as their history. They are really some of the most primitive behind-hand birds in existence.[950]

Cherry-Garrard's two companions, Wilson and Bowers, subsequently died on their return from the Pole, so it was left to him to attempt to complete the egg collecting mission by delivering the three eggs to the eminent scientists at the Natural History Museum in London (Fig 5.21).

> And now the reader will ask what became of the three penguins' eggs for which three human lives had been risked three hundred times a day, and three human frames strained to the utmost extremity of human endurance. Let us leave the Antarctic for a moment and conceive ourselves in the year 1913 in the Natural History Museum in South Kensington.[951]

His written account ends with a comedic coda describing how he found himself insisting that the museum curator, who displayed acute disinterest, should issue a receipt for the eggs the collection of which had cost Cherry-Garrard and his companions such trouble.

> Chief Custodian. You needn't wait.
>
> Heroic Explorer. I should like to have a receipt for the eggs, if you please.
>
> Chief Custodian. It is not necessary: it is all right. You needn't wait.
>
> Heroic Explorer. I should like to have a receipt.[952]

In what might be considered a failed journey, or wasted effort, the eggs did not prove the theory, which which became generally discredited shortly afterwards. The museum curators were not inclined to take the eggs seriously – they had arrived a little too late, the First World war had intervened, and the embryologist Richard Assheton, who had intended to research the eggs, had died, so they were put aside until the 1930s, by which time the recapitulation theory had become defunct, and the belief that penguins were ancient birds had also been discredited.[953]

With yet another episode in the history of these eggs, they have recently become useful to present-day researchers who have been collecting genetic

950 Wilson, 'Some Notes on Penguins', p. 3.

951 Cherry-Garrard, *The Worst Journey in the World*, p. 304.

952 Cherry-Garrard, *The Worst Journey in the World*, p. 305.

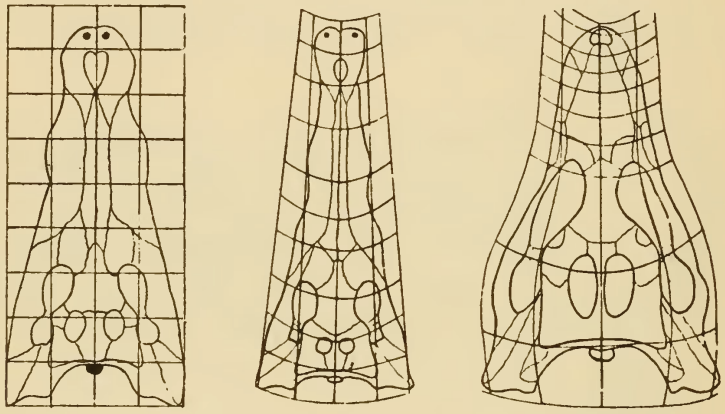
953 Williams, *With Scott in the Antarctic*, p. 248.

material from the shells to give insights into evolution, and measuring the isotopes in the shell to make comparisons with atmospheric composition to assess degrees of climate change.[954] I understand the penguin egg story as an allegory for misguided exploits that envisage different outcomes but nonetheless retrieve something that is of use to an as-yet-unimagined future.

954 John A. Raven, 'Climate: Baselines for the Biological Effects of Environmental Change' *Current Biology*, **21**, 5 (8 March 2011), pp. R190–R192, <http://dx.doi.10.1016/j.cub.2011.01.055> [2 August 2015].

Fig 5.21

By an exaggeration of the same process we at once get an approximation to the form of one of the sharp-snouted, or longirostrine, crocodiles, such as the genus *Tomistoma*; and, in the species figured, the oblique position of the orbits, the arched contour of the occipital border, and certain other characters suggest a certain amount of curvature, such as I have represented in the diagram (Fig. 527, *b*), on the part of the horizontal coordinates. In the still more elongated skull of such a form as the Indian Gavial, the whole skull has undergone a great longitudinal extension, or, in other words, the ratio of x/y is greatly diminished; and this extension is not uniform, but is at a maximum in the region of the nasal and maxillary bones.



a *b* *c*

Fig. 527. *a, Crocodilus porosus; b, C. americanus; c, Notosuchus terrestris.*

This especially elongated region is at the same time narrowed in an exceptional degree, and its excessive narrowing is represented by a curvature, convex towards the median axis, on the part of the vertical ordinates. Let us take as a last illustration one of the Mesozoic crocodiles, the little *Notosuchus*, from the Cretaceous formation. This little crocodile is very different from our type in the proportions of its skull. The region of the snout, in front of and including the frontal bones, is greatly shortened; from constituting fully two-thirds of the whole length of the skull in *Crocodilus*, it now constitutes less than half, or, say, three-sevenths of the whole; and the whole skull, and especially its posterior part, is curiously compact, broad, and squat. The orbit is unusually large. If in

Fig 5.22

the diagram of this skull we select a number of points obviously corresponding to points where our rectangular coordinates intersect particular bones or other recognisable features in our typical crocodile, we shall easily discover that the lines joining these points in *Notosuchus* fall into such a coordinate network as that which is represented in Fig. 527, *c*. To all intents and purposes, then, this not very complex system, representing one harmonious "deformation," accounts for *all* the differences between the two figures, and is sufficient to enable one at any time to reconstruct a detailed drawing, bone for bone, of the skull of *Notosuchus* from the model furnished by the common crocodile.

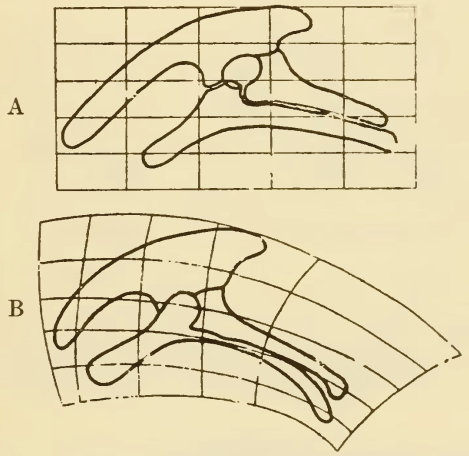


Fig. 528. Pelvis of (A) *Stegosaurus*; (B) *Camptosaurus*.

The many diverse forms of Dinosaurian reptiles, all of which manifest a strong family likeness underlying much superficial diversity, furnish us with plentiful material for comparison by the method of transformations. As an instance, I have figured the pelvic bones of *Stegosaurus* and of *Camptosaurus* (Fig. 528, *a*, *b*) to shew that, when the former is taken as our Cartesian type, a slight curvature and an approximately logarithmic extension of the x-axis brings us easily to the configuration of the other. In the original specimen of *Camptosaurus* described by Marsh*, the anterior portion of the iliac bone is missing; and in Marsh's restoration this part of the bone is drawn as though it came somewhat abruptly to a sharp point. In my figure I have completed this missing part

* *Dinosaurs of North America*, pl. LXXXI, etc., 1896.

Evolution But Things Have Turned out Otherwise

The great hope of the nineteenth century had been that complete knowledge would be attained. All that was necessary, it had been thought, was for standardised methods of data collection to be established so that those in the field could harvest their information: anthropologists would observe the disappearing primitives; geographers would survey the last remaining places on the globe: the fossil record would in due course fill in the gaps and supply all the secrets of evolution. Pitt-Rivers's typological method had been a product and promulgator of this belief and had aimed to set out a clear history of progress. There is a genealogy of ideas traceable from Pitt-Rivers's typological thinking to the field of eugenics.[955] Pitt-Rivers's grandson, George Pitt-Rivers, wrote a nasty little polemic on eugenics titled *Weeds in the Garden of Marriage* in 1931. In the introduction Sir Arthur Keith recognises both genealogies:

> I was not surprised to find that my young friend, Captain Pitt-Rivers, the author of this book, was the grandson of the great General … The late General devoted his energies and his fortune to uncovering long dead civilizations; his grandson is now giving his strength and his time to the uncovering of dangers which are latent in our modern civilization and which, if allowed to pass undiagnosed and untreated, will ultimately bring about national death.[956]

What Pitt-Rivers's descendant does not hold in common with his grandfather is a belief in progress. In the introduction to the eugenic polemic, George Pitt-Rivers writes:

> Thus most of us have by now abandoned the childish futility that comforted the nineteenth century, that belief in an inevitable and never-ending 'progress'.[957]

Pitt-Rivers senior's typological method espoused in 1874, in 'Principles of Classification', proceeded by grouping together cultural artefacts according to visual and formal similarity in order to tell the story of evolving change. This method was also to be found in the work of others of the period, such as the morphological biologist Ernst Haeckel (1834–1919) *Kunstformen*

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955 George Pitt-Rivers made an address to the Royal Anthropological Institute titled 'Effect on Native Races of Contact with European Civilization' on 14 December 1926. Published in *Man* XXVII, 1927, pp. 2–10.

956 Sir Arthur Keith in the preface to George Pitt-Rivers, *Weeds in the Garden of Marriage* (London: Noel Douglas, 1931), p. x.

957 George Pitt-Rivers, *Weeds in the Garden of Marriage,* p. 3.

Der Natur (1904) [958] as well as D'Arcy Wentworth Thompson's book, *On Growth and Form* (1916), which applied a method of visual transformation to exploring evolution.[959] *On Growth and Form* begins with a similar tone of disappointed expectations as expressed by Pitt-Rivers's grandson.[960] The first edition was written during the First World War, and the second edition was published during the Second World War in 1942, which in my view may account for some of the sense of despondency. But Thompson's stated cause of disappointment relates to his discussion of Darwin's *Origin of Species* and the very 'curious thing' of 'the failure to solve the cardinal problem of evolutionary biology'.[961]

In this hugely influential book Thompson demonstrated how the application of a grid and Cartesian coordinates allowed extrapolations to occur from one two-dimensional form to another (Fig 5.22).

> Let us inscribe in a system of Cartesian coordinates the outline of an organism, however complicated, or part thereof: such as a fish, a crab, or mammalian skull. We may treat this complicated figure, in general terms, as a function of x, y.[962]

This principle of creating deformations inscribes the new figure that represents the old 'under a more or less homogeneous strain'.[963] Every point of the original form is transposed onto another point that keeps its position relative to all other points.[964] Thompson himself notes the same map-making comparison in relation to the problem the morphologist faces in making transformations from one form to another:

> The problem is closely akin to that of the cartographer who transfers identical data to one projection or another.[965]

Thompson explains that the task for the student of natural forms is to follow

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958 Ernst Haeckel, *Kunstformen Der Natur* (Leipzig and Vienna: Bibliographische Institute, 1904).

959 D'Arcy Wentworth Thompson, *On Growth and Form*. 2nd edn (Cambridge: Cambridge University Press, 1942).

960 Thompson, *On Growth and Form* (first published 1916, new edn 1942)

961 Thompson, *On Growth and Form*, p. 1092.

962 Thompson, *On Growth and Form*, p. 1033.

963 Thompson, *On Growth and Form*, p. 1033.

964 This form of transposition was discussed in Chapter Three: Curious Perspective in relation to anamorphic projection and again in The Grid and the Globe in relation to map making.

965 Thompson, *On Growth and Form*, p. 1033.

the distortion in the reverse direction.

> The morphologist will not seek to draw his organic forms into a new and artificial projection; but, in the converse aspect of the problem, he will enquire whether two different but more or less obviously related forms can be so analysed and interpreted that each may be shewn [*sic*] to be a transformed representation of the other.[966]

Comparing the method with cartography, in which data are transposed along x, y coordinates to generate deformations, Thompson proposes that the same method is useful to the evolutionary biologist in the reverse direction; that is, for creating projections as a way of looking into the history of an organism's evolution.

With an understanding of this transpositional method as a way of discovering evolutionary connections, we can now consider what Thompson identified as the cause for disappointment:

> In the study of evolution, and in all attempts to trace the descent of the animal kingdom, fourscore years' study of the Origin of Species has had an unlooked for and disappointing result. It was hoped to begin with, and within my own recollection it was confidently believed, that the broad lines of descent, the relation of the main branches to one another and to the trunk of the tree, would soon be settled, and the lesser ramifications would be unravelled bit by bit and later on. But things have turned out otherwise.[967]

The worrisome elements that had caused the disappointing result were the 'breaches of continuity'[968] that might have previously been understood as the omissions of the expected data. What Thompson goes on to argue is that the gaps, the previous conception of which he had likened to '*hiatus valde deflendus* in an ancient manuscript'[969] were not in fact the consequence of missing data awaiting discovery or retrieval from the fossil record, but rather arose from a 'deeper reason' connected with the method of classification itself.

> A 'principle of discontinuity,' then, is inherent in all our classifications, whether mathematical, physical or biological.[970]

In conclusion, Thompson describes how the evidence for slow and gradual

966 Thompson, *On Growth and Form*, p. 1033.

967 Thompson, *On Growth and Form*, p. 1092.

968 Thompson, *On Growth and Form*, p. 1093.

969 Thompson, *On Growth and Form*, p. 1093. *Hiatus valde deflendus* can be translated as 'a gap or deficiency greatly to be deplored'.

970 Thompson, *On Growth and Form*, p. 1095.

evolution has not been found. This was because 'formal resemblance[s]' as a 'trusty guide to the affinities of animals', 'under certain circumstances […] cease to exist'.[971] The evidence of the similarity of forms, such as supplied by Thompson, supports the existence of leaps, mutations, and sudden changes, as opposed to Darwin's idea of gradual change over long periods of time.[972]

So for Thompson, gaps in knowledge did not signify temporal omissions, the consequence of as-yet-unearthed fossils and analogous to missing parts of manuscripts, but were indicative of the principle of discontinuity.[973]
In addition and connected to this was the fact that classifications cannot contain the surplus that is not included under the definitions of a class, and this, Thompson notes, 'is inherent in all our classifications'.[974] The visual mathematical method that Thompson employs in which the x, y Cartesian coordinates of one grid are transposed onto another, deploys a function that is fully reversible. Yet I would argue that what is required is not a reversal, in which 'complicated figures' are 'treated as x,y' but rather a chiastic transposition akin to chromosomal crossover enabling genetic exchange.

I suggest that despite the fact that Thompson was attending to the patterns of variety and difference in evolution, which are produced through genetic recombinations, his mathematical and formalist method of transposition fails to identify the spontaneous, mutant leaps that evolution generates because his method is one based upon reflection and reversibility. Thompson's method fails to recognise transpositions of genetic exchange. In contrast I suggest that what is required is a method of transposition that is chiastic, in keeping with more recent understanding of genetic inheritance. In this transposition, the x, y of Cartesian coordinates becomes the X and Y of sex chromosomes (Fig 5.23). Thought of in this way, such transpositions have something in common with Braidotti's notion of transposition. Following her argument, sexual difference puts into play these transpositions and decentrings and deferrals.

971 Thompson, *On Growth and Form*, p. 1038.

972 Thompson, *On Growth and Form*, pp. 1094–1095.

973 Thompson, *On Growth and Form*, p. 1095.

974 Thompson, *On Growth and Form*, p. 1095.

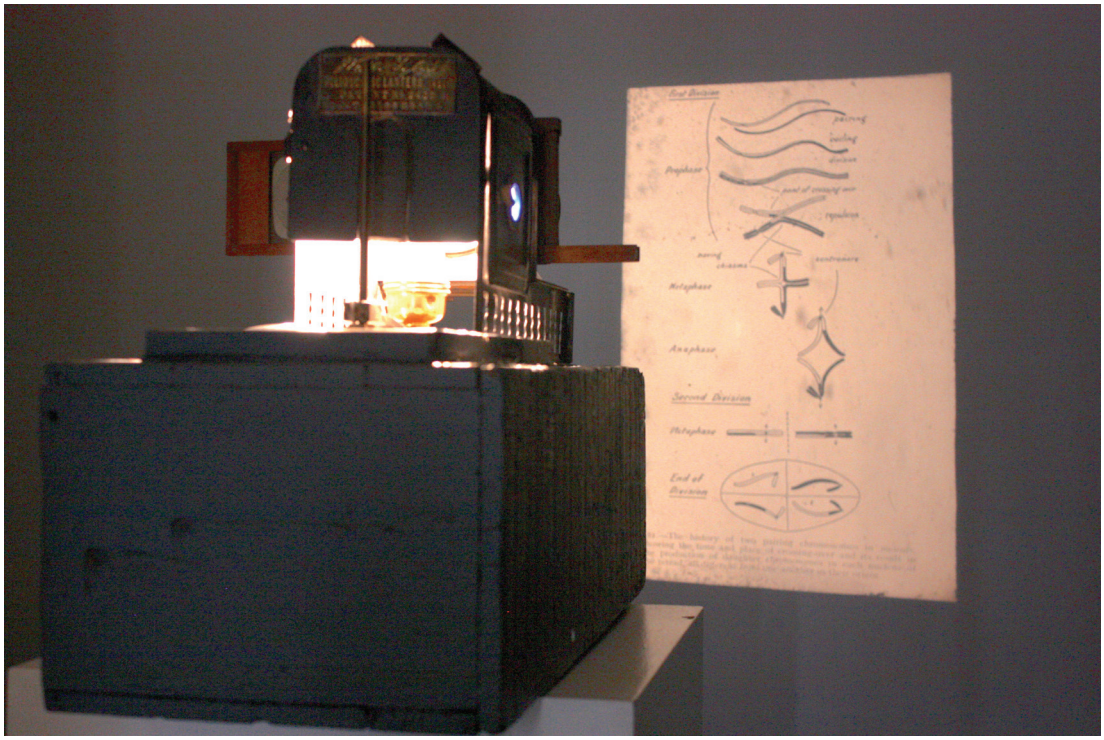

Fig 5.23

Next Fig 5.24
Following Fig 5.25


VOL·III· PART·II·
THE SOUTH POLAR TIMES · 1911 ·

A Chapter of Antarctic History **Some Fragments**

Recurrent themes in the contributions to the *South Polar Times* are those in which the polar explorers write fantasies of how the future will judge the evidence that remains of their activities. The first example in Volume I is contributed by Able Seaman F. Wild and is titled 'An Old Document', which states that it was 'found on the 1st April, in the year of grace 2198 AD' and indicates that the original is held in the 'British Museum'.[975] As a parody of Egyptology, this article is presented as a papyrus with antiquated language describing the commissioning of their vessel the *Discovery* for exploration of 'a vast country far to the south of any of the Great King's possessions'. In each subsequent episode in this contribution the author announced 'un-iced' further fragments, introducing 'Leaves from an ancient papyrus'[976] and 'Hieroglyphic record'.[977] The third volume, contributed by E.L Atkinson and illustrated by Wilson with pyramids and turnstiles, continues this form of pastiche with 'Extracts from some Antarctic Archives: The Depot Journey',[978] 'Extracts from Some Antarctic Archives – The Winter Journey'[979], and the contribution by Henry Bowers titled 'Extracts from some other Antarctic Archives: Spring Journey to the West'.[980] These contributions play with the genre of the missing manuscript by noting gaps in the text with a series of dots.

Reading the *South Polar Times* chronologically, one can trace a gradual change in the type of contribution from the first through to the third volume and fourth (Fig 5.24). The fourth volume was written by the remaining men in the hut as they waited out the winter in the knowledge that the polar

975 Frank Wild, 'An Old Document', in *South Polar Times*, ed. by Robert Falcon Scott, Ernest Schackleton, Louis Bernacchi, Vol. 1, part IV (London: Smith, Elder, & Co., 1907), p. 13.

976 Frank Wild, 'Leaves from an Ancient Papyrus', in *South Polar Times*, ed. by Louis Bernacchi Vol. 2, part VII, p. 32.

977 Frank Wild, 'Hieroglyphic Record', in *South Polar Times*, ed. by Louis Bernacchi, Vol. 2, part VIII, pp. 28–30.

978 Edward L. Atkinson, 'Extracts from some Antarctic Archives: The Depot Journey' in *South Polar Times*, ed. by Apsley Cherry-Garrard, Vol. 3, part I (London: Smith Elder, & Co., 1914), pp. 45–47.

979 Edward L. Atkinson, 'Extracts from Some Antarctic Archives – The Winter Journey' in *South Polar Times*, Vol. 3, part II, pp. 101–02.

980 Henry R. Bowers, 'Extracts from some other Antarctic Archives: Spring Journey to the West' in *South Polar Times*, Vol. 3, part III, pp. 137–139.

party had not survived.[981] The articles tend to become less factual, and more fantastic, with fewer focusing on instruments and science facts, but rather more humour and parody, and science fiction, with more pastiches of archaeological discoveries. I suggest that the change from these earlier contributions to the later ones can be described as a refraction from science fact to science fiction.

'A Chapter of Antarctic History' illustrates this shift *within* the narrative of the article. It begins with geological fact and turns into futuristic fiction derived from a projection of some imagined future, with conjectures based upon what has gone before (Fig 1.3).[982] The article foresees a warming after the glacial period, but adds to these changes, racial and gendered imaginings.

> What is to be expected in the future in this region? […] Forests will cover the slopes of the Western Mountains. In the moraine-fed troughs of the Ferrar and Dry Valleys will dwell a white race, depending partly on the fertile glacial soil, but chiefly on tourists from effete centres of civilisation.[983]

A similar crossover from science fact to science fiction is found in another remarkable contribution titled 'Fragments of a Manuscript found by the people of Sirius when they visited the earth during the exploration of the solar system',[984] written by the man in charge of meteorology on the *Terra Nova* expedition, George Clark Simpson. It is written as a fantasy of future retrospection. The missing or illegible parts of the manuscript are represented by lacunae typed as ellipses. The illustration shows a large-headed alien with 'quite empty' vacuum tubes plugged into his head encircled by batteries and wires and a soda bottle in glass crystal next to a bottle of *elixir vitae* at its withered feet (Fig 5.25).[985] The decay of culture is described and attributed to both the rising threat of effeminacy, owing to the lack of barbarians to conquer, and an increase in decadence expressed in a 'desire for nothing but

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981 Apsley Cherry-Garrard, Frank Debenham, Anne Savours eds., *The South Polar Times; First Facsimile of the South Polar Times,* Vol. IV (Cambridge, Scott Polar Research Institute in association with J. & S.L. Bonham, 2010) [no page numbers in facsimile.]

982 Thomas Griffith Taylor, 'A Chapter of Antarctic History', in *South Polar Times*, Vol, 3, part I, p. 14.

983 Griffith Taylor, 'A Chapter of Antarctic History', pp. 14–15.

984 George Clarke Simpson, 'Fragments of a Manuscript Found by the People of Sirius when they Visited the Earth during the Exploration of the Solar System', *The South Polar Times,* Vol. 3, part II, April to October 1911 (London: Smith, Elder, & Co,.1914), pp. 75–78. September 1911; hereafter referred to as 'Fragments of a Manuscript'.

985 Simpson, 'Fragments of a Manuscript', p. 75

luxury and self-indulgence'.[986] Except for an interest in medicine applied to equalising birth and death rates, there is no science for science's sake. Eugenics is intimated in the concern with birth rate and cultural degeneracy.[987] Simpson gives an account of a moment in which laws are required to maintain birth rate, when there are no deaths or births, but a stasis, as if nature and sexual desire were insufficient. Perhaps the special conditions of an all-male expedition party, away from wives and lovers of all and any sort, was the prompt for such dystopic visions of sexual entropy. He writes: 'The ice-bound shores of McMurdo Sound became the centre of the world. From it flowed life-giving fluid which alone sustained the human race'. Simpson describes the elixir as follows, including the gaps in the manuscript:

> liquid was of crystal clearness, but had the faintest fluorescent glow, which gave it exquisite colours when agitated…it was the production of great extremes of temperature…electric furnace…liquid air…demand was beyond supply. No sufficiently large source of energy with the requisite fall of temperature could be found…remained the privilege of the few and these ruling classes.[988]

The narrative continues with the decline and the desperate attempts to glean knowledge from the archives.

> …decrease in number of blizzards, failure of the Ross Sea to freeze, absence of very low temperatures on the Barrier…bitterly regretted their failure to keep meteorological records…records of the British Antarctic Expedition were unearthed from the highest shelves of the lumber rooms of the libraries and were perused with avidity…[989]

The prescience of Simpson's science fiction is absolutely striking as we currently debate the fact and fiction of climate and its changes, with our global attention on the Arctic and Antarctic as the diminishing heat sinks that support the human habitability of this planet. Simpson's expiring character ends the piece by writing, 'My dying thoughts are the folly which neglected the teachings of the Scientists of the British Antarctic Expedition 1910–1912'.[990] Ringing out from the text, speaking to our time, Simpson writes, 'the

986 Simpson, 'Fragments of a Manuscript', p. 77.

987 Simpson, 'Fragments of a Manuscript', p. 77.

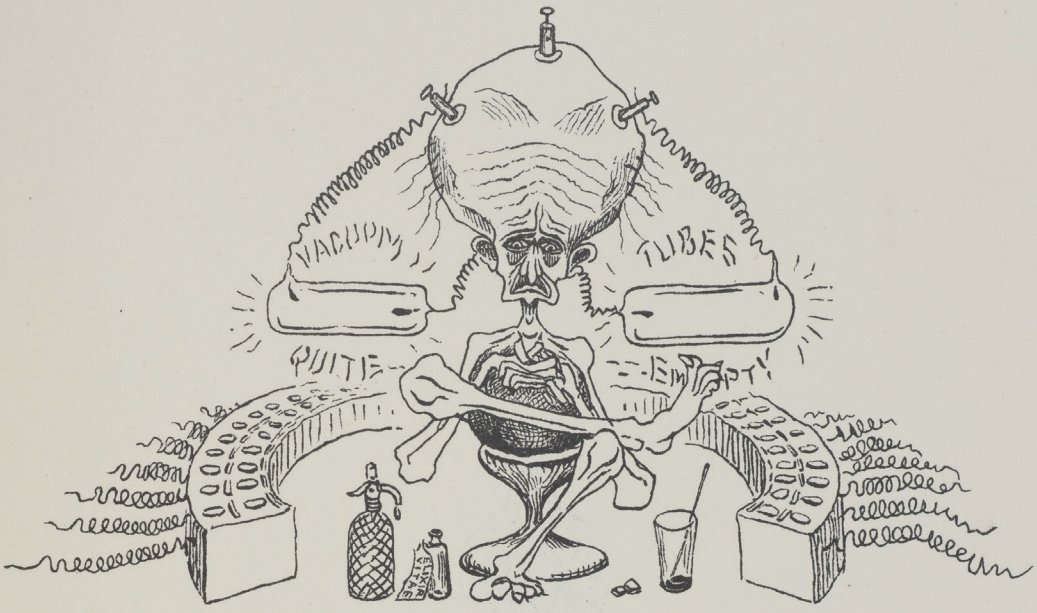
988 Simpson, 'Fragments of a Manuscript', pp. 77–78.

989 Simpson, 'Fragments of a Manuscript', p. 78.

990 Simpson, 'Fragments of a Manuscript', p. 78.

great question of the day was, 'Does climate change?'[991]

[991] Simpson, 'Fragments of a Manuscript', p. 78.



FRAGMENTS OF A MANUSCRIPT FOUND BY THE PEOPLE OF SIRIUS WHEN THEY VISITED THE EARTH DURING THE EXPLORATION OF THE SOLAR SYSTEM.

I know not why I write for there will be none to read; but the history of the human race since the dawn of civilisation has been written, and I feel impelled to set down the manner of the end. With this intent.....

The great intellectual activity which had its dawn in the Victorian age was followed by a reaction resulting in a desire for nothing but luxury and self-indulgence.....

.....human race had become almost uniform and there were no barbarian tribes to overrun and destroy the effeminate

.....the pains of motherhood and the responsibilities of parentage.....only by the most stringent laws could

> Nov. 24 Lat. 81°15' […] My mind is much occupied with a hope that we shall be able sometime to go to Japan together. I have a longing to sketch there and see the country and the people more than any other place in the world. They are the only really naturally artistic race living, and I am sure one would learn much from them.[992]

Whilst Wilson was *en route* to one of the most unreachable points on the planet, his outward journey to the South Pole, he wrote to his wife with happy anticipation of future journeys elsewhere.[993] These hopeful imaginings centred on Japan. Wilson's aesthetic admiration for Japan had certainly been encouraged by conversation with Ponting, and their exchanges on art and photography and discussions of other cultures supported by the magic lantern slide shows.[994] Might the touching hopefulness that Wilson expresses in the above letter to his wife be merely an example of orientalism that exoticises the other while affirming the dominant centre? Or is it too much to credit Wilson's desire to go to Japan as indicative of his openness to difference? Could it be that Wilson, a white, male, European explorer, while on the outward leg of an expedition that still expected to succeed in another British Imperialist conquest of global space, is hoping for something different, a future elsewhere of cultural and aesthetic possibilities beyond his current horizons?

Before its discovery, Antarctica had been hypothesised on the basis of symmetry.[995] The idea that the Arctic and Antarctica were analogous and symmetrical in climatic and other matters had also manifested in theories that speculated as to whether the Arctic and Antarctic would prove host to similar species. With regard to this search for resemblance, Professor D'Arcy Wentworth Thompson contributing to the Zoology section in the *Antarctic Manual 1901*, wrote:

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992 Seaver, *Edward Wilson of the Antarctic*, p. 271.

993 Seaver, *Edward Wilson of the Antarctic*, p. 271.

994 See in this thesis section 'Notes on a Lecture on Sketching' in Chapter 2, in which Wilson makes reference to Ponting, adding comments on the skill of Japanese artists. Wilson also makes a number of diary entries and mentions in letters home to his wife, in which he notes his discussions with Ponting and the Japanese aspect of these exchanges.

995 See discussion in Chapter Three: 'The Grid and Globe', which refers to Denis Cosgrove, *Geography and Vision*, p. 204; and C. Murray, 'Mapping Terra Incognita', pp. 103–12.

> It has been maintained by some that […] there is a common bipolar fauna non-existent in the tropics, and even that hundreds of species in the Arctic and Antarctic fauna are identical one with another. This view is contested by others, and I for one do not share it.[996]

Thompson, specialist in the Arctic and its life forms, did not expect to find straightforward symmetry with Antarctic life. Perhaps the fact that Thompson was not looking for similarity, that his method did not proceed by analogy, allowed him to end his article by writing the following:

> Lastly, let me reiterate the one request that the naturalist at home makes always of the collector abroad, and that is – to collect everything, even the invisible. After everything that the collector can discriminate has been selected, what remains is likely to be no less valuable.[997]

It is a curious thing for the author of *On Growth and Form* to request: the visual thinker on biological morphology and the transformation of forms in nature asks the collector abroad to collect the invisible. There is an implicit hope in this instruction – that what is invisible may yet become visible. This becoming visible is conceived under the current methods of Thompson's time, with the expectation that with more care and a bigger magnifying lens, smaller creatures may come into sight. But we can read Thompson's instruction to our own purposes here and consider it as a reference to the hope for different modes of vision, founded on different methods and instruments, a mode of vision open to the invisibility of sexual difference.

Braidotti proposes that, 'a nomadic post-anthropocentric philosophy displaces the primacy of the visual'.[998] There is a connection here between the visual as the primary and most valued sense in philosophy and the association of this with the visibility of sexual difference. When Laura Green writes that 'phallocentrism does not allow for the perception of sexual difference',[999] she also adds that 'difference itself cannot be grasped via an appeal to the visible, as it is precisely the invisible in which the maternal-feminine is positioned, and

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996 D'Arcy Wentworth Thompson, 'Kerguelen Island: An Introduction to Antarctic Zoology', in *The Antarctic Manual,* pp. 276–87. p. 286

997 Thompson, 'Kerguelen Island: An Introduction to Antarctic Zoology', p. 287.

998 Braidotti, *Transpositions, p. 103.*

999 Laura Green, 'A "Fleshy Metaphysics": Irigaray and Battersby on Female Subjectivity', *Women: A Cultural Review,* 22 (2011), p. 152.

in which the categories of self and other are challenged.[1000] It is this difference that remains invisible.

With Braidotti's philosophical aim of 'displacing the primacy of the visual' and the invisibility of sexual difference, the question emerges of whether a decentred and non-unified subjectivity can show the differences between the invisible and the visible. Braidotti asks,

> In the age of anthropocene, the phenomenon known as 'geo-morphism' is usually expressed in negative terms as environmental crisis, climate change and ecological sustainability. Yet, there is also a more positive dimension to it in the sense of reconfiguring the relationship to our complex habitat, which we used to call 'nature'. […] This is the 'milieu' for all of us, human and non-human inhabitant of this particular planet, in this particular era. […] My argument is that, again, this change of perspective is rich in alternatives for renewal of subjectivity. What would a geo-centred subject look like?[1001]

We need to reconcile the apparent contradictions here, in which sexual difference is invisible, but this sexual difference must be a determining aspect of a new visuality, a new subjectivity? This can be understood if we pursue Code's 'ecological thinking' and follow what she and Braidotti both argue for: that is, a change to our epistemologies, and in this case specifically our epistemologies of vision. This includes a change in our understanding of the observer and observation: the observer is not separate from the environment but is a geo-centred, ecological subject. The unrest of sexual difference is in the displacement, the shift, the *Entstellung*, so that the visual is a different kind of visuality; a visuality of displacements and shifts, refracted through, and sensitive to, changes in medium, and transpositions between boundaries.

Rather than repeating the heroic expedition as artwork – either as *en plein air* immediacy or the ground-breaking, self-referential, and medium-specificity of avant-garde modernism – I advocate an art-making that returns to Antarctica through the archive in order to read hope into the condition in which we find ourselves under the Anthropocene. For some there is an argument that this condition is one of belatedness; of already having arrived too late at the understanding of our own readability in the geological strata of the future, the

1000 Green, 'A "Fleshy Metaphysics": Irigaray and Battersby on Female Subjectivity', p. 152.

1001 Braidotti, *The Posthuman*, p. 81.

message of which spells out our extinction.[1002] This interpretation can function as a reason for not acting to forestall what some say is already destined to happen.

Braidotti writes of this environmental politics that denies our agency and mourns the coming catastrophe. There is a reversal in this, which we could consider as a chiastic reversal too, that is that mourning usually looks back to a loss in the past, but to mourn a future loss might make it akin to anticipation of what lies in the future. But it locks that anticipation in to a fixed expected outcome.[1003] Braidotti says:

> My argument is rather that the politics of melancholia has become so dominant in our culture that it ends up functioning like a self-fulfilling prophecy, which leaves very small margins for alternative approaches. I want to argue therefore for the need to experiment with other ethical relations as a way of producing an ethics of affirmation.[1004]

This political dynamic is caught up in contrary temporalities: mourning usually looks back to what has been lost rather than anticipating a future loss.[1005] It is because of the consequences for agency and action that situating mourning as a future-oriented affect rather than as a past-oriented one is a politically urgent issue. Hope can be understood as a decentring future-oriented affect. Braidotti asserts that 'the yearning for sustainable futures can construct a liveable present'.[1006] Braidotti conceives of hope as part of her nomadic method, the part she names as programmatic, rather than utopian, the aims of which are to 'borrow energy from the future to overturn the conditions of the present'.[1007]

> A prophetic or visionary dimension is necessary in order to secure an affirmative hold over the present, as the launching pad for sustainable

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1002 Claire Colebrrok, *Death of the Posthuman: Essays on Extinction*, Vol. 1 (Michigan: Open Humanities Press, 2014), p. 10.

1003 Rosi Braidotti, *Nomadic Theory: The Portable Rosi Braidotti*, p. 352.

1004 Braidotti, 'Powers of Affirmation: Response to Lisa Baraitser, Patrick Hanafin and Clare Hemmings', p. 142.

1005 This is the same temporal relation that Jane Rendell explores in 'May Mo(u)rn' in Sophie Warren and Jonathan Mosely, *Beyond Utopia* (Berlin: Errant Bodies Press, 2012).

1006 Braidotti, *The Posthuman*, p.192.

1007 Rosi Braidotti in conversation with Timotheus Vermeulen, 'Borrowed Energy' *Frieze*, Issue 165, September 2014 <http://www.frieze.com/issue/print_article/borrowed-energy/> [5 May 2015]. See also Ernst Bloch, *The Principle of Hope*, trans. by Neville Plaice, Stephen Plaice & Paul Knight (Cambridge, Mass,: MIT Press, 1986). He similarly has ideas of latency and becoming and considers utopia as process ontology.

> becoming or qualitative transformations. The future is the virtual unfolding of the affirmative aspect of the present, which honours our obligations to the generations to come.[1008]

Braidotti is concerned with a hope that projects itself into the future and that looks towards those who come after us. In this thesis I have taken the archive of Wilson's Antarctic watercolours as a site from which to look back to past and look forward to the future. I propose a different relation to the past and to the artefacts of the past, not one of reproduction and facsimile, or conservation, but to find it refracted into new interpretations.

In mathematics, the mark in A`, known as the prime symbol, indicates that A` is derivative of A. This is the case in transformations of Cartesian coordinates in which the (x, y) once translated or transposed will be represented as (x`,y`). It is important to distinguish the prime mark – ` – used in mathematical transformation, and the apostrophe mark – ' – used in the marks that indicate quotation or the 'knowingness' of camp. But I propose that an affinity between these two applications comes together in transposition and chiastic *ekphrasis*. And this has been my method for enacting a form of generative interpretation through the archive of Wilson's watercolours.

My re-visiting of the archive of Antarctic exploration entails re-readings, and consequent distortions, taking things to another place, as Freud would describe it, but with an aim of finding life and newness in the stories of dead heroes. Antarctica, a continent without ruins, devoid of indigenous human life, an empty space available to mathematical ambition, a zone excluded from the arrangements of ethnographic museum displays, has atmospheres intimately implicated in the future human habitation of the planet. I have a hopeful motive in the archival encounter with the Antarctic watercolours of Edward Wilson. I have looked to Antarctica and its archive in search of an answer to the kind of optics that might be open to difference.

1008 Braidotti, *New Materialisms: Interviews & Cartographies*, eds. Dolphijn and van der Tuin pp. 19–37, p. 36.

Fig 5.26

Prologue **Epilogue**

Glass **Ice**

This image permission is restricted to the print version only

Fig 6.1

Archive The Arkive

The biblical story of Noah's Ark follows a chiastic literary structure. The ark, the boat built to save two of every kind of creature, both male and female, tells the story of a form of genome bank required to start over again, after the flood. So, in my neologism, 'Arkive', I have taken the archive of stored historical documents and combined it with the ark of generative difference. Can this form of arkive offer refuge from the Anthropocene?[1009]

Dr David Barnes, a marine zoologist at the British Antarctic Survey, has returned to the archive to look at the reports taken and marine specimens collected during the *Discovery* and *Terra Nova* expeditions.[1010] The ship that took the explorers to the Antarctic in 1910–1913 was used to collect natural history samples of marine life. Many of these reports were compiled by Dennis Lillie, the expedition's biologist, who was pictured by Ponting sitting on deck of the *Terra Nova* in 1911 holding a large glass sponge (Hexactinellid sponge) retrieved by dredging Antarctic waters (Fig 6.1).[1011] The glass sponge nearly covers his upper torso. Another lies at his feet. Lillie contributed to the expedition's twenty-five volumes of scientific data, which are now providing Barnes with a baseline for making comparisons with current biological and climate-related measurements.

Barnes's aim has been to compare growth rates of marine animals. Barnes explains that owing to the sensitivity and speed of change in Antarctica 'the way that biology responds there is going to be our early warning system on the way that life is going to respond elsewhere'.[1012] The marine animal samples that he brings back to the British Antarctic Survey aquaria allow him to observe

1009 Colebrook, 'Scale and Refuge: Twilight of the Anthropocene'.

1010 David K. A. Barnes, Piotr Kuklinski, Jennifer A Jackson, Geoff W. Keep, Simon A. Morley, Judith E. Winston, 'Scott's Collections Help to Reveal Accelerating Marine Life Growth in Antarctica' *Current Biology*, **21**, 4 (2011), pp. 147–48. <doi: 10.1016/j.cub.2011.01.033> [24 July 2015] para. 3/7.

1011 Herbert Ponting, *D. Lilley* [*sic*] *with a Glass Sponge* (glass plate negative, 20 x 17.5 cm) Accession P2005/5/874, SPRI.

1012 David Barnes, 'Climate Change in Antarctica: David Barnes, British Antarctic Survey', *The Naked Scientists*, The University of Cambridge, 12 August (2010) <www.thenakedscientists.com/HTML/interviews/interview/1399/> [23 July 2015] paras 19; hereafter referred to as 'Climate Change in Antarctica'.

the affect on their skeletons of changes in water, specifically the acidity-related changes that are having an impact upon the capacity for these organisms to make skeletons. Some of the causes of these effects in skeletons have come about owing to the same changes that 'could really reshape our planet'.[1013] Barnes says that although he is observing the effects of change upon other creatures he thinks that 'we will be the biggest losers out of climate change'.[1014]

> Our problem is knowing how fast these things are going to happen.[….] Because it's got the most unstable large ice masses, global sea level rise will be dictated by what goes on in Antarctica.[1015]

This same Antarctic ice can also be understood as a kind of archival data storage. The palaeo-climatologist Lonnie Thompson has spent a lifetime gathering data by drilling and analysing ice cores to examine the evidence that ice can hold.[1016] Thompson recalls: 'Once I visited the ice cap, I could see there was a climate record there. It then became a matter of how to extract that record'.[1017] His observation of glacier retreat has shown that the planet is warming at an alarming rate.[1018] The ice cores are melting away and as they melt, the data that might prompt action is vanishing too. Thompson says, though, that data won't change people's behaviour: 'It's human nature to deal with only what is on your plate today'.[1019] As long as the problem seems to remain elsewhere, the focus of people's attention will remain the immediate day-to-day of their lives. As a result of the melting of the ice, Thompson's research has become both more risky and more pressing. He describes his experience of one melting glacier location that he has revisited twenty-six times as like visiting a dying patient.

> You know there's no hope; you can only watch it shrink away. So my work has become a salvage operation – to capture history before it disappears forever.[1020]

1013 D. Barnes, 'Climate Change in Antarctica', para. 15/19

1014 D. Barnes, 'Climate Change in Antarctica', para. 18/19

1015 D. Barnes, 'Climate Change in Antarctica', para. 15, 17/1[9]

1016 Pat Walters, 'Risk Takers', *National Geographic,* **223**, 1 (2013), pp. 58-67, p.62.

1017 Terri Cook, 'Down to Earth With: Glaciologist Lonnie Thompson', *Earth*, 17 January 2015 <www.earthmagazine.org/article/down-earth-glaciologist-lonnie-thompson > [2 August 2015] paras 16, para. 8/16.

1018 Pat Walters, 'Risk Takers', p. 62.

1019 Pat Walters, 'Risk Takers', p. 62.

1020 Pat Walters, 'Risk Takers', p. 62.

His personal reprieve from serious illness[1021] has generated a new sense of urgency to preserve the collected ice cores for future generations.

A spectacle of extinction meets the visitor to the Natural History Museum. The magnificent cast of a skeleton of the Diplodocus dinosaur was first put on show in the central hall of the Natural History Museum in London in 1905.[1022] The Natural History Museum was one of the great museum institutions generated out of the Crystal Palace Exhibition of 1851. If one walks up the stairs behind the statue of Darwin, one finds the converted exhibition space for the Cadogan Gallery where treasures from the collection are presented. Its two longest walls are constructed out of sixteen stained glass windows. It is simultaneously both a glass cabinet and, I suggest, a kind of ark. On show in November 2013 in one of the twenty-two glass display vitrines were the Emperor penguin eggs, collected by Wilson, Bowers and Cherry-Garrard at Cape Crozier, that were so unceremoniously received from Cherry-Garrard in 1913.[1023]

Also on display during my visit in the next cabinet were a few of the glass models made by Leopold Blaschka and his son Rudolph (Fig 6.2). These hand-crafted models might arguably belong in the neighbouring Victoria and Albert Museum, which, like the Natural History Museum, was also spawned from the Great Exhibition, but with a distinct remit to house examples of manufacturing, art, and design.[1024] These extraordinary Blaschkas glass models are derived from marine specimens that are microscopic, less than a millimetre in size, such as the radiolaria, which, like glass sponges, are silica based like the glass in which their models have been fashioned. The Blaschkases' skills were especially required with regard to marine specimens such as these, which were difficult to preserve in a state reminiscent of their living form, as the colour quickly faded and their delicate shapes were quickly distorted once they were put into preserving fluid. The museum's information on these exhibits describes

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1021 Misti Crane, 'Heart Transplant Giving Climatologist Lonnie Thompson a Second Chance', *The Columbus Dispatch*, Tuesday 21 May 2013 <http://www.dispatch.com/content/stories/science/2013/05/19/lonnie-thompsons-second-chance.html> [14 Jan 2014].

1022 It was announced in early 2015 that the iconic cast of the diplodocus dinosaur is to be replaced by a blue whale skeleton.

1023 See in this thesis the section titled 'Some Notes on Penguins' in Chapter 5.

1024 Stocking, *Victorian Anthropology,* p. 6.

how:

> With no apprentices, the secret of the their techniques died with them. Even with more refined modern tools, glass artist today have been unable to replicate the Blaschkas' delicate work.[1025]

The Endangered Archives project at the British Library speaks with a similar urgency: 'Unless action is taken now, much of mankind's documentary heritage may vanish – discarded as no longer of relevance or left to deteriorate beyond recovery', [1026] and 'problems of fragility and obsolescence [are] associated with the physical formats to which we have entrusted our documentary heritage – such as audio tapes, glass negatives, and acidic paper'.[1027] It is reminiscent of tales of extinction about the myth of the last Tasmanian on show in the Hobart Museum during the first part of the twentieth century.[1028] Stocking describes the inclusion of four items in the Crystal Palace Exhibition of handicrafts made by aboriginal Tasmanians, whom Stocking describes as 'literally "civilized off the face of the earth" within a few short decades of European settlement'.[1029] The following quote from the Endangered Archives Project presents the case for urgency in terms that are reminiscent of the way that the Victorian anthropologist spoke about primitive people:[1030]

> Finally, there is what is perhaps the most insidious and growing danger to archives – the increasing trend towards cultural homogenisation. As more and more of the world embraces the industrial and technological revolution, and as the pace of globalisation accelerates, the remaining evidence of pre-industrial societies, their history and culture, is fast being discarded.[1031]

Whereas the Endangered Archives Project pays attention to the material vulnerability of traditional archival material, there is a now a new form of archival practice that has taken as its object the genetic material of endangered

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1025 Natural History Museum, 'Blaschka Glass Models' <http://www.nhm.ac.uk/galleries/galleries-home/treasures/specimens/blaschka/>, [24 August 2015], para. 2/9.

1026 'Endangered Archives', British Library, <eap.bl.uk/index.a4d >, [23 July 2015], para. 1/13

1027 'Endangered Archives: The Threat to Archives', <eap.bl.uk/pages/threat.html>, [23 July 2015] para. 3/8

1028 See in this thesis the section titled 'The Archive and The Field' in Chapter 5.

1029 Stocking, 'Epilogue: The Extinction of Paleolithic Man', in *Victorian Anthropology*, pp. 274–83, p. 275.

1030 Henry Balfour, introduction, Lane Fox Pitt-Rivers, *The Evolution of Culture and Other Essays*, p. xvii.

1031 'Endangered Archives: The Threat to Archives', para 8/8

species so that DNA material has begun to be archived in museum collections. The Frozen Ark was set up in 1996 as an initiative by Nottingham University: 'The Ark's consortium is a network of research and conservation bodies including of zoos, aquaria, museums and research laboratories around the world',[1032] including the Natural History Museum and Zoological Society of London.[1033] Subsequently the Natural History Museum in London launched its involvement in the Frozen Ark project in 2004, calling it the 'world's first DNA bank dedicated to all the world's endangered animals' and also as a 'global reference collection'. Its remit is to 'collect, preserve and store DNA and tissue samples from animals in danger of extinction'.[1034] The Frozen Ark is kept as part of the frozen Molecular Collection of plant and animal material at the Natural History Museum.[1035]

The establishment of these forms of archival projects for genetic material can generate a false sense of security. As with the examples of the glass-making practice of the Blaschkas, it is all very well keeping the results as treasures, the glass models of organisms without their glassmaker, in the glass display cabinet, but a practice is required to carry the knowledge forward. Equally, the living creatures that were the model's inspiration might now be kept in genome banks known as zoological gardens, for the sake of conservation, but for substantive survival the gene pool must be shared between and carried by a large enough number of bodies, and those bodies need to be renewing the gene pool in reproduction.

The expectation that it is enough to simply preserve information as an archive, as in the seed bank or the genome-mapping project, is subject to the same fallacy that elevates genetic information to the status of the key to life. Donna Haraway describes the limits of this kind of thinking as follows:

1032 The Frozen Ark: 'Saving the DNA and the viable cells of the world's of endangered species' <www.frozenark.org/background> [23 July 2015]

1033 The Frozen Ark: 'Saving the DNA and the Viable Cells of the World's of Endangered Species', para 3 of 4.

1034 Natural History Museum, 'Frozen Ark project launches, Natural History Museum' <www.nhm.ac.uk/about-us/news/2004/july/news_5295.html> [13 July 2015.]

1035 Thanks to the manager of Molecular Collections, Molecular and Frozen Tissues at the Natural History Museum, Jaqueline Mackenzie-Dodds, for a tour of the labs. 'Frozen Ark: Life in the Freezer' (14 July 2015).

> Embodied information with a complex time structure is reduced to a linear code in an archive outside time.[1036]

Haraway writes critically on the genome as master molecule, in which the significant part is limited to only the nucleic acid, not the overall cellular milieu that is integral to the genetic function. In contrast, Haraway provides the following much more distributed and intra-active characterisation:

> A gene is a knot in a field of relatedness. It's a material-semiotic entity; a concretization that locates [in the mapping sense of locates] and substantializes, inheritance. […] But those molecules – the DNA molecules – are never working in isolation. They are always interacting with other cell structures. The most common way of saying it is that the smallest unit of life is the cell, not the gene, but the gene is always in interaction with these cellular histories. It is always in process, yet – and this is the issue – we talk about it as if it were a simple, concrete thing.[1037]

The aquarium of which the Blaschkases made wonderful glass versions, is a microcosm of the world. There was a Victorian enthusiasm for aquaria.[1038] James Shirley Hibberd, early in *The Book of Aquarium and Water Cabinet* published in 1856, warns that '*The Philosophy of the Aquarium* must be clearly understood by those who purpose to cultivate it':

> It is a self-supporting, self-renovating collection, in which the various influences of animal and vegetable life balance each other, and maintain within the vessel a correspondence of action which preserves the whole.[1039]

This advice might have been addressed to the Victorian enthusiast who bought the Blaschkas' models for inclusion in their decorative aquaria displays, or for later scientists, such as Barnes, who bring marine creatures to the aquarium for research, and to artists and archivists who wish to build an arkive out of the archive.

I suggest that it is a mistake to retreat to the archive as a refuge from

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1036 Haraway, *Modest_Witness@Second_Millennium. Femaleman©_Meets_Oncomouse™*, (New York; London: Routledge, 1997), p. 245.

1037 Thyrza Nichols Goodeve, 'A Conversation with Donna Haraway', *Ars Electronica Festival*, Exhibition Catalogue, Linz, Austria, 1997, <http://90.146.8.18/en/archives/festival_archive/festival_catalogs/festival_artikel.asp?iProjectID=8463> [20 May 2015].

1038 Philip F. Rehbock, 'The Victorian Aquarium in Ecological and Social Perspective', in *Oceanography: The Past,* ed. by Mary Sears and Daniel Merriman (New York: Springer 1980), pp. 522–39.

1039 James Shirley Hibberd, *The Book of the Aquarium and Water Cabinet; or Practical Instructions on the Formation, Stocking, and Management, in All Seasons, of Collections of Fresh Water and Marine Life*, (London: Groombridge & Sons, 1856), p. 7.

the Anthropocene, and to conceive of its use as a store-house of frozen preservation, in which examples of what remains of otherwise extinct specimens are housed. In response to the characterisation of the museum as an archive of extinction, presenting the spectacle of the dinosaur, or the last of the Blaschka models or the last Tasmanian, I suggest that we remember that there are contemporary artists making delicate glass models, with cohorts of skilled glass workers,[1040] and the last Tasmanian was survived by descendants, as suggested by the significant increase in recent years in the number of Tasmanians who identify as aboriginal.[1041]

I suggest that rather than an archival mode as demonstrated in The Frozen Arkive, in which the aim is the preservation of data in the face of the oncoming extinction, we need to transpose our archival practice into an arkival one; a term that I invent to describe this different mode of archival practice. We need ice in this arkive too, but not as the means to cryogenically preserve non-living samples. We need ice through which to refract our sensibility, or ethics, to transpose the archive into the arkive as a place of generative newness.

1040 See the Danish glass artist Steffen Dam <http://www.steffendam.dk/index.php?page=news-and-press> [6 January 2014]; Luke Jerram makes glass microbiology in clear glass <http://www.lukejerram.com/glass/gallery> [6 January 2014]

1041 Richard Flanagan, 'The Lost Tribe', *Guardian*, 14 October 2002 <www.theguardian.com/world/2002/oct/14/australia.features11> [28 July 2015], paras 29, para. 19/29.

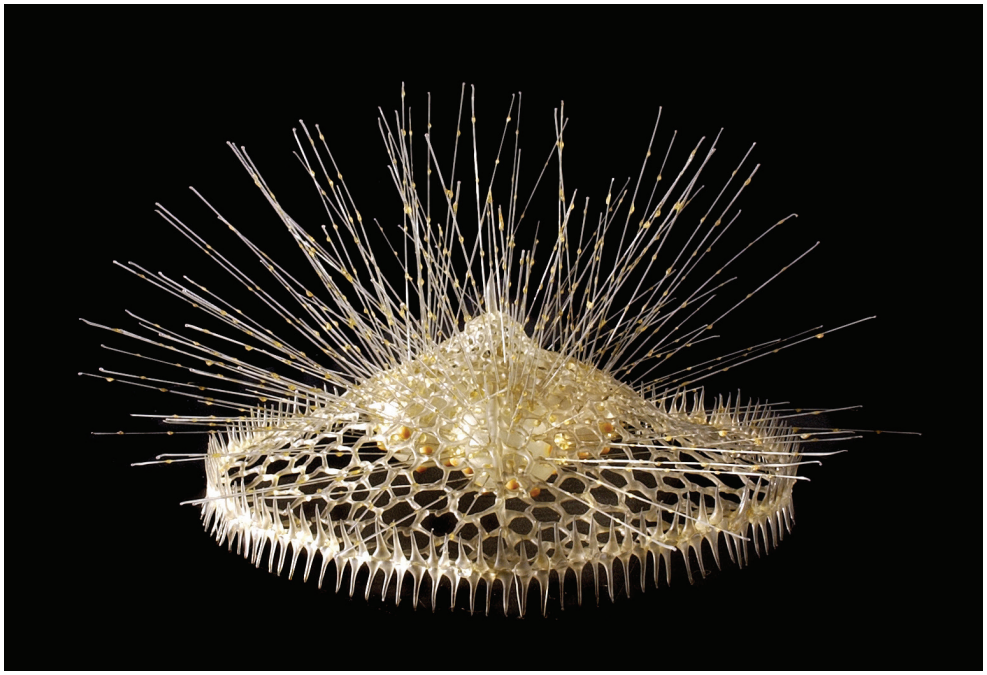

Fig 6.2

> We looked south with our powerful glasses but could see nothing but the dead white plain.[1042]

The glass lens has supported so many different instruments of observation. In the telescope the glass lens has been used to open up frontiers in global exploration and in the microscope to reveal those things previously invisible because of minute scale. Glass shares a number of qualities with ice, but there are only rare anthropological examples of other cultures using ice to make lenses. One such example is to be found in the Boas Anniversary Volume, Anthropological Papers,[1043] assembled in honour of Franz Boas, Professor of Anthropology and 'presented to him on the twenty-fifth anniversary of his doctorate' titled 'The Colour of Water'.[1044] The ice lens is referred to here in a footnote by Friedrich Hirth in his contribution on Chinese Metallic Mirrors, and 'ice lens' is listed in the index: 'Ice, pieces of, used in China in place of convex lenses'.[1045] The capacity to fashion an ice lens is also a technique proposed for wilderness survival. I propose that an observation refracted through ice can change how we see things. What might the dead white plain look like through an ice lens?

Thompson draws an analogy in *On Growth and Form* between nature and the glass blower's craftsmanship in his exploration of nature's patterns:

> Nature does just what the glass blower does, and, we might even say, no more than he. […]The glass-blower starts his operations with a **tube,** which he first closes at one end so as to form a hollow vesicle, within which his blast of air exercises a uniform pressure on all sides; but the spherical conformation which this uniform expansive force would naturally tend to produce is modified into all kinds of forms by the trammels or resistances set up as the workman lets one part or another of his bubble be unequally heated or cooled.[1046]

Thompson finds a different comparison between glass and ice in 'On

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1042 Ernest Shackleton on reaching furthest south in 1909. Cited in Coutauld, ed., *From the Ends of the Earth*, p. 320.

1043 Laufer, (ed.), *Boas Anniversary Volume*

1044 Franz Boas, *Beiträge Zur Erkenntnis Der Farbe Des Wassers*.

1045 Freidrich Hirth, 'Chinese Metallic Mirrors with notes on some ancient specimens at the Musée Guimet', in *Boas Anniversary Volume*, pp. 208–56, pp. 226–27

1046 Thompson, *On Growth and Form*, pp. 1049–1050.

Concretions, Spicules, etc. Of Skeletons of Sponges' (Fig 6.3),[1047] in which he describes these intriguing forms and writes that 'the little skeletons remind us of such things as snow crystals' (Fig 6.4).[1048]

Haeckel's drawings provided reference for innumerable artists and designers, from the tiny Blaschkas to more monumental scales of architecture. René Binet (1866–1911) took inspiration directly from Haeckel's drawings of radiolaria for the design of the monumental entrance gate to the Exposition Universelle de Paris in 1900.[1049] This was an extraordinary confection of pattern and tessellation that created an open-dome entrance to the East approach from Place de la Concorde for the exposition. Looking at Binet's publication *Esquisses Décorative*[1050] from 1902 one can see the easy transition from the formal symmetry that Haeckel's interpretations of natural form, exploited in the Art Nouveau ornamental decorative aesthetic. Examples of trends in parametric design or material engineering inspired by radiolaria and glass sponges have been seen in the present-day great exhibitions such as the Venice Biennale of Architecture, but it was not until 2014 that the continent that is the habitat for so many of these inspirational bio-forms was represented in the Venice Biennale as the Antarctic Pavilion.[1051]

Science writer Janine Beynus makes the convincing point in *Biomimicry: Innovation Inspired by Nature* that what is needed now is an imitation of the natural patterns of sustainability to produce a nature-inspired design ethos, rather than an imitation of forms.[1052] Michael Pawlyn distinguishes biomimetic design as that which 'engages with the function delivered by a particular natural adaptation' by 'mimicking the functional basis of biological forms, processes and systems to produce sustainable solutions'. 'Biomimetic' is distinct

1047 Thompson, *On Growth and Form,* pp. 678–79

1048 Thompson, *On Growth and Form*, p. 694.

1049 Olaf Breidbach, 'Brief Instruction to viewing Haeckel's Pictures', in Ernst Haeckle, *Art Forms in Nature* (Munich; London; New York: Prestel Verlag, 2010), p. 15. Some of these radiolaria are included in Haeckel's later highly influential *Kunstformen der Nature* (Leipzig and Vienna: Bibliographische Institute, 1904).

1050 Binet, Rene, *Esquisses Décorative* (Paris: Libraire Central de Beaux Arts, 1902).

1051 Antarctic Pavilion, Venice Biennale, curated by Nadim Sammen, <http://www.antarcticpavilion.com/about.html> [28 July 2015].

1052 Janine M. Benyus, *Biomimicry: Innovation Inspired by Nature* (New York: Perennial, 2002)

from the term 'biomorphic', which is properly applied to design if it is only the formal appearance that is imitated.[1053] Pawlyn proposes that if principles of biomimicry were to be applied to architecture, then material usage could be 'cycled permanently in endless transformations'.[1054]

Glass sponges have provided recent inspiration to engineers and designers. According to the website of the Aizenberg Biomineraliszation and Biomimetics Lab led by Joanna Aizenberg: 'over the years [glass sponges'] skeletal systems and their constituent elements (called spicules) have served as useful model systems for the design and fabrication of robust and damage tolerant structures'.[1055] The skeletal structure of the glass sponge applies on a micro scale the principles of structural engineering that you will find in a skyscraper. Both radiolaria and glass sponges are made up of a siliceous skeleton, that is, a skeleton based upon silica, rather than calcium. Here, glass is produced without the melting furnace that human glass-making requires. Rather than a coral, which is a multiple colony, Hexactinellida glass sponges are singular animals that create their own city-like habitats. It was previously thought that these giants of two metres tall would have taken up to 10,000 years to grow, but this no longer seems to be the case, in the light of new research in the waters of Antarctica.[1056] This recent research has identified a great increase in the growth of glass sponges.[1057]

In 1995–96 the *Larsen A* ice shelf, an area of 770 square miles, collapsed. Large sections of *Larsen B* followed in 2002. The change in the colour from the reflective white ice to blue liquid water accelerated heat absorption, so

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1053 Michael Pawlyn, *Biomimicry in Architecture* (London: RIBA Publishing, 2011), p. 2.

1054 Pawlyn, *Biomimicry in Architecture*, p. 114.

1055 See research at the Wyss Institute, Harvard University, led by Professor Joanna Aizenberg, 'Glass Sponges hold internal secrets to structural strength' <http://wyss.harvard.edu/viewpage/565. > [23 July 2015]

1056 Dorte Janussen, Laura Fillinger, Tomas Lundälv, Claudio Richter, 'Rapid Glass Sponge Expansion after Climate-Induced Antarctic Shelf Collapse', *Current Biology*, **23**, 14 (2013) <doi: 10.1016/j.cub.2013.05.051.> [14 May 2015], pp. 1330–1334.

1057 Joe Hanson, 'Retreating Antarctic Ice Fuels Surprising Glass Sponge Invasion', *WIRED*, 2013, <http://www.wired.com/wiredscience/2013/07/antarctic-glass-sponges/> [15 Nov 2013]; Jane J. Lee, 'Antarctic Glass Sponges Live Life in Fast Lane: Explosion in Glass Sponge Population Forces Researchers to Rethink How Animals Live in Antarctic', *National Geographic* (2013) <http://news.nationalgeographic.co.uk/news/2013/07/130711-antarctica-glass-sponge-fast-growth-ocean-science/> [15 Nov 2013].

providing a warmer sea and more sunlight for plankton.[1058] The increase in light reaching the sea floor and consequent increase of phytoplankton and algae, which have been able to grow in these new conditions, have created new food sources for the glass sponges. Here, ice has become glass; not by a process involving the metaphoric or analogous similarity of properties exploited through a poetic practice, nor through a chiastic literary reversal, but rather through a material, ecological and biological transposition.

In the journey of the arc of this writing I have proposed a number of different transpositions from glass to ice in part through my work as an artist through making works in glass. It was a sculpture that first drew my eyes to the Antarctic archive at Scott Polar Research Institute. The sculpture portrayed a figure in bronze, arms outstretched, the head thrown back and feet together with the left knee slightly bent. The figure's pose was apparently diving skywards, a swimmer of the air, exchanging medium, like the penguin, the flightless bird that now flies in water. The bronze was dated around 1922, and titled *Youth*. It is the work of Captain Scott's wife, Kathleen Scott. The sculpture was modelled on the body of T.E. Lawrence's younger brother.[1059] An admiration for the kind of maleness represented by Antarctic exploration was exhibited in this sculpture but through an intriguing displacement: it was as if the celebration of Antarctic heroism had been represented by a series of transpositions: from the explorers of the frozen ice cap of the South Pole, to T.E Lawrence, hero of the hot and arid sand desert, to the body of his younger brother. This memorial to the Polar explorers, those men who epitomise a form of heroic masculinity, remembers them through the figure of an adolescent, somewhat androgynous boy. I think I recognised something of the anomaly of that boy's girlishness as I walked past the statue as an adolescent girl myself. It made the figure of the otherwise hermetic, impervious male explorer porous to new interpretation.

1058 Lee, Jane J., 'Antarctic Glass Sponges Live Life in Fast Lane: Explosion in Glass Sponge Population Forces Researchers to Rethink How Animals Live in Antarctic'.

1059 According to the SPRI website: 'The statue in the garden was made by Lady Kathleen Scott (Captain Scott's widow) around 1922. The model was A.W. Lawrence, younger brother of Lawrence of Arabia and later Cambridge Professor of Classical Archaeology. It was presented to the Institute for the opening of the 1934 building'. See <www.spri.cam.ac.uk/about/history/grounds.html > [28 July 2015].

In the transposition from glass to ice, as well as a shift from reflective to refractive knowledge, perhaps we can also imagine the era of the architecture of the Crystal Palace transposed into one of atmospheres. In this thesis, I have imagined further transpositions and refractions and applied Freud's dream interpretation method of *Entstellung* to try to release some of the latent subjectivities – ethnographic and feminine – within the archive. In physics the meaning of latency refers to the energy required to generate changes of state from solid to liquid to gas and back. I am thinking here of the energy released by interpreting the latent subjectivities as contributing to the latent energy shift required to make a phase transition from a historical ethics of classical humanist anthropocentrism to a post-human ethics – geo-centred and ecological – fit for the future. An optics derived from ice could be understood as a catalyst for a phase transition. I have argued in this thesis for the need for a change of state from glass to ice in order to imagine a different optics. How can ice refract our practices of observation? If 'our powerful glasses' were lensed with ice then looking south we might not see the dead white plain ahead of us but instead the possibility of survival.

Fig 6.3

Archival visit: Scott Polar Research Institute. Cambridge, 12 July 2012, 9 a.m. – In the Archive. Tea by the bell from the ship of the Terra Nova expedition. 20p for coffee, put it through the hole on the head of the penguin piggy bank. Naomi says that the Ruskin cabinets are still here, but not in use. 'They are very nice' she says 'But don't conserve sufficiently'. Temperature and light. She also says that 'Winsor & Newton may be sponsors – must seek in archive – ephemera are a good place to look – paper cuttings and magazines, old glory-?' The sign on the front of the plastic folder holding the archive material advises to bring a jumper or cardigan as it is cool in the reading room. It is at a similar temperature to the stores'. There is a man here dressed as a woman – a member of staff. A nice grey cardigan a grey bob, and skirt and court shoes. Floral pattern. Light fabric. Beige-stockinged legs. The whole physique is out of kilter, sinewy calves, narrow hips and broad shoulders. I spoke to her over tea. He is the museum curator. And helped to redesign the new museum space. I tell her that I used to go to school round the corner and I also say that I never came into the Scott Polar Research Institute all the time that I was there, even though I must have walked past it every day. He explains that the entrance on Lensfield Road has not been like that for so long and that the dedicated public museum space is quite recent. The door used to be much less inviting, round the side of the building, and the opening times were limited and irregular. I feel justified that it was not just a failure of my youthful curiosity that stopped me visiting, but more of an architectural and structural impediment to entry. She is describing the interesting earlier situation of display of the Wilson watercolours in a gallery with animal skins on the floor and mahogany panelling. He shows me a photograph of the old gallery space in a book, with Wilson's watercolours framed in amongst all these colonial furnishings and mounted taxidermy animal heads. The imperial feel of these artefacts is really interesting, and how it makes Wilson's works seem like trophies from afar. But I can't really focus on what he is saying. As this man, dressed as a woman, is talking, I find myself quite distracted by having noticed that we are wearing very similar neck scarves.

Fig 6.4

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